



14892 - Determining the Progenitor of a Red Transient

Cycle: 24, 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) S16EA	WFC3/IR	1	21-Apr-2017 21:14:38.0	yes
02	(1) S16EA	WFC3/IR	1	21-Apr-2017 21:14:42.0	yes
03	(1) S16EA	WFC3/IR	1	21-Apr-2017 21:14:46.0	yes

3 Total Orbits Used

ABSTRACT

In recent years several nova-like transients have been observed whose peak brightness is between that of novae and supernovae. Various names have been suggested for them, such as red transients, luminous red novae, and intermediate luminosity optical transients. Despite the disagreement in nomenclature, it is agreed that these transients have outburst mechanisms different than in classical novae or supernovae. Only a few have been well studied, and it may be said that, as a class, they are not yet well understood. One of the impediments to modeling and understanding them is that little is known of the nature of the progenitor stars, because the progenitors appeared unexceptional and sometimes were extragalactic and thus too faint even to appear in standard catalogs. However, the spectral type and mass of the progenitor star are crucial model inputs. The field of one recent

extragalactic transient was imaged in several HST bandpasses and offers the valuable opportunity to learn the nature of a progenitor star. Because of pointing uncertainties, it is uncertain which object is the progenitor, so we request new HST images to identify the object in order to derive the spectral type of the progenitor star.

OBSERVING DESCRIPTION

We will devote one orbit each to the three filters in the proposal (Y, H, and J), exposing as long as possible in one orbit.

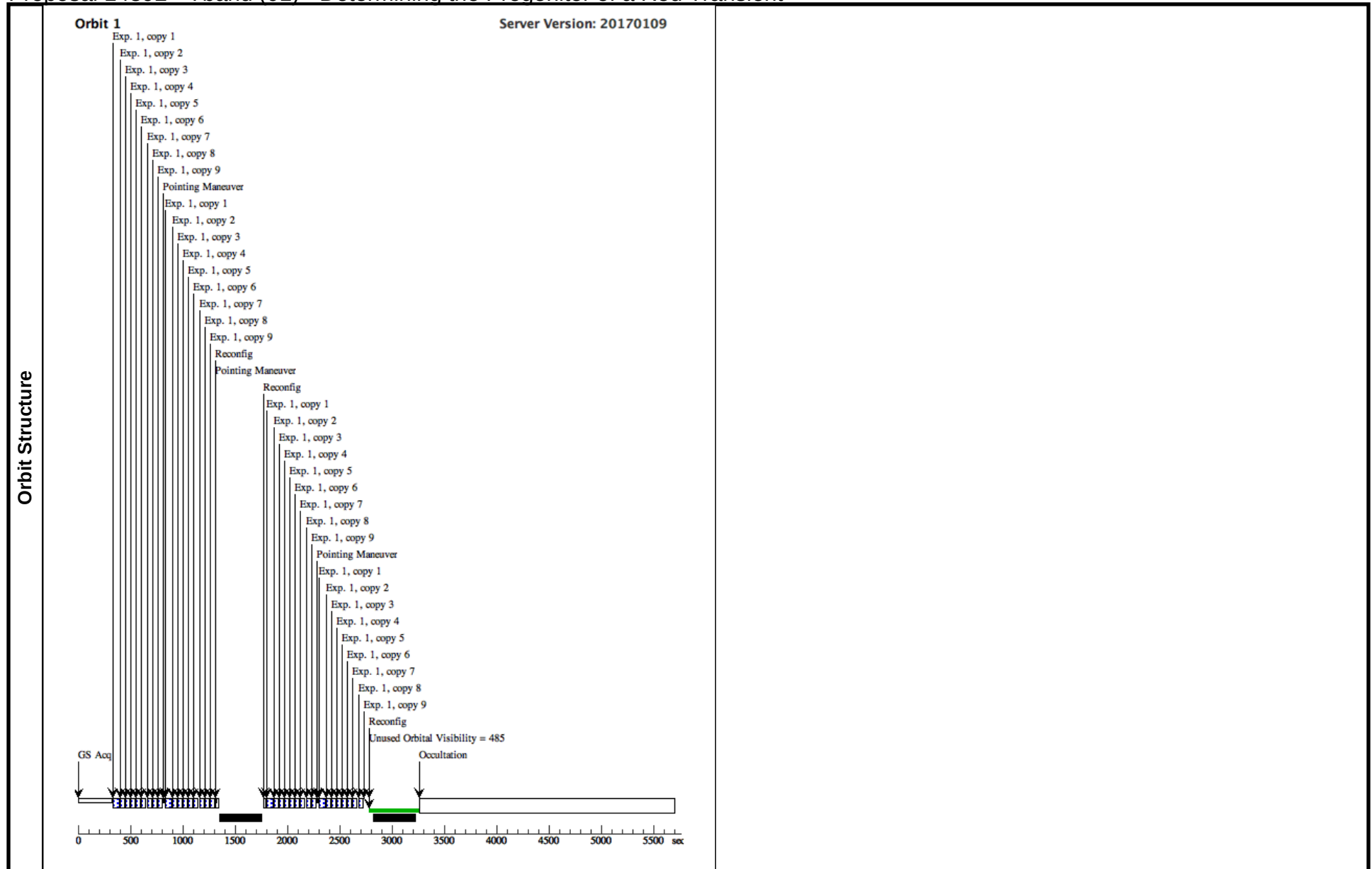
Proposal 14892 - Yband (01) - Determining the Progenitor of a Red Transient

Visit	Proposal 14892, Yband (01), implementation Sat Apr 22 01:14:48 GMT 2017				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365		Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	S16EA	RA: 12 15 38.6100 (183.9108750d) Dec: +36 19 46.90 (36.32969d) Equinox: J2000		V=19.0+/-1.0
Comments: Extended=NO					
Reference Frame: ICRS					

Proposal 14892 - Yband (01) - Determining the Progenitor of a Red Transient

	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	F105W	(1) S16EA	WFC3/IR, MULTIACCUM, IRSUB256	F105W	SAMP-SEQ=SPARS 5; NSAMP=15		Pattern 1, Exps 1-1 i n Yband (01) (1)	33.16592 Secs X 9 (1193.973 Secs)	[1]
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									[==>(Pattern 1, Copy 8)]	
									[==>(Pattern 1, Copy 9)]	
									[==>(Pattern 2, Copy 1)]	
									[==>(Pattern 2, Copy 2)]	
									[==>(Pattern 2, Copy 3)]	
									[==>(Pattern 2, Copy 4)]	
									[==>(Pattern 2, Copy 5)]	
									[==>(Pattern 2, Copy 6)]	
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									[==>(Pattern 2, Copy 9)]	
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Proposal 14892 - Yband (01) - Determining the Progenitor of a Red Transient



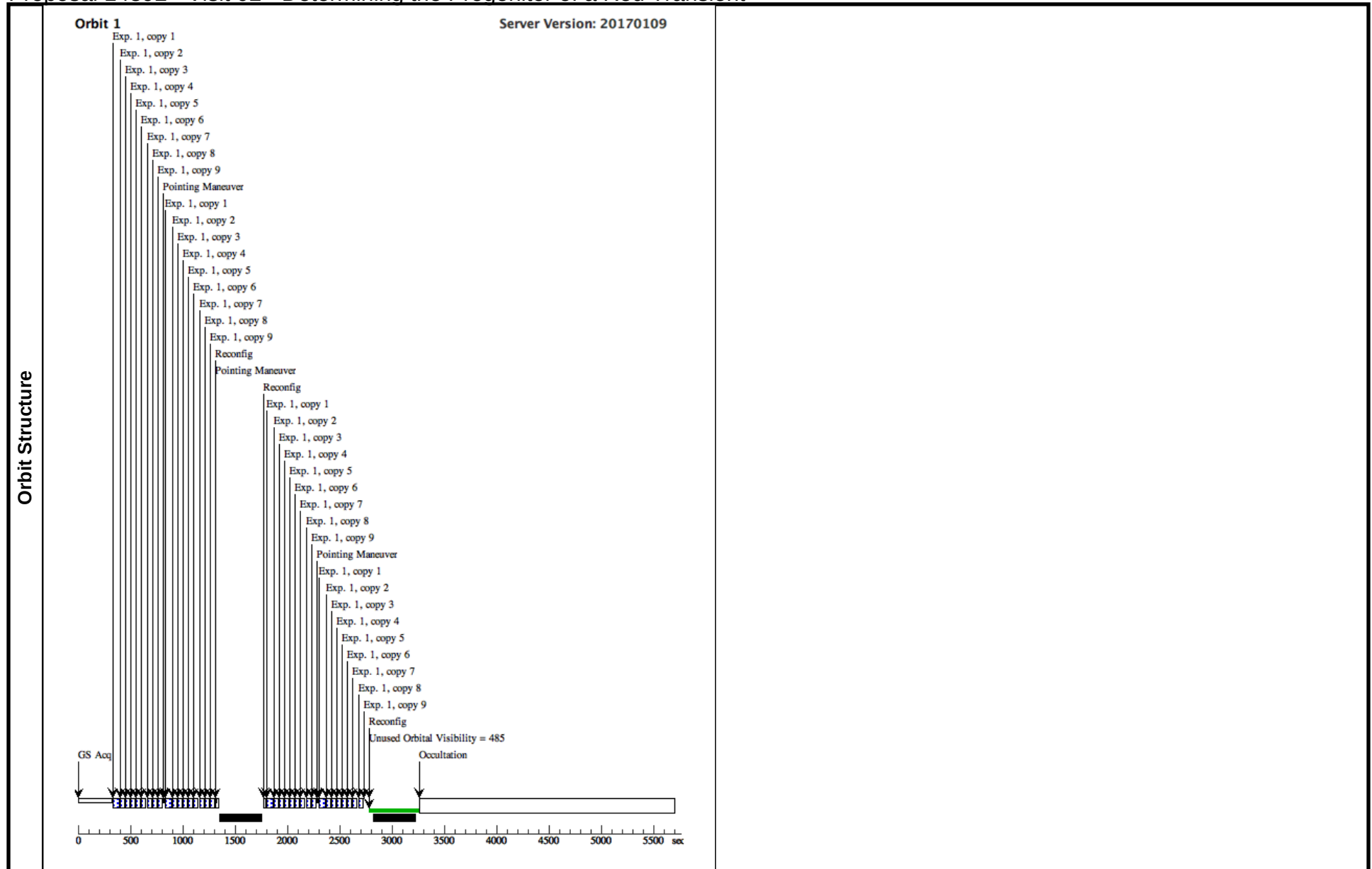
Proposal 14892 - Visit 02 - Determining the Progenitor of a Red Transient

Visit	Proposal 14892, Visit 02, implementation Sat Apr 22 01:14:48 GMT 2017				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365		Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	S16EA	RA: 12 15 38.6100 (183.9108750d) Dec: +36 19 46.90 (36.32969d) Equinox: J2000		V=19.0+/-1.0
Comments: Extended=NO					
Miscellaneous Reference Frame: ICRS					

Proposal 14892 - Visit 02 - Determining the Progenitor of a Red Transient

	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	F110W	(1) S16EA	WFC3/IR, MULTIACCUM, IRSUB256	F110W	NSAMP=15; SAMP-SEQ=SPAR S5		Pattern 1, Exps 1-1 i n Visit 02 (1)	33.16592 Secs X 9 (1193.973 Secs)	[1]
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Proposal 14892 - Visit 02 - Determining the Progenitor of a Red Transient



Proposal 14892 - Visit 03 - Determining the Progenitor of a Red Transient

Visit	Proposal 14892, Visit 03, implementation Sat Apr 22 01:14:48 GMT 2017				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365		Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false	(1)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	S16EA	RA: 12 15 38.6100 (183.9108750d) Dec: +36 19 46.90 (36.32969d) Equinox: J2000		V=19.0+/-1.0
Comments: Extended=NO					
Miscellaneous Reference Frame: ICRS					

Proposal 14892 - Visit 03 - Determining the Progenitor of a Red Transient

	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	F160W	(1) S16EA	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=15; SAMP-SEQ=SPAR S5		Pattern 1, Exps 1-1 i n Visit 03 (1)	33.16592 Secs X 9 (1193.973 Secs)	[1]
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