



14902 - Imaging and UV Spectroscopy of the Luminous and Unique Nuclear Transient PS16dtm

Cycle: 24, Proposal Category: GO/DD

(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) PS16DTM	STIS/CCD STIS/NUV-MAMA	1	08-Feb-2017 21:01:29.0	yes

1 Total Orbits Used

ABSTRACT

The latest generation of untargeted time domain surveys have discovered new rare types of transients such as superluminous supernovae and tidal disruption events. Recent discoveries have also included luminous transients coincident with the nuclei of their host galaxies, making classification into established categories difficult, especially when the galaxy also has an active galactic nucleus. We propose to obtain imaging and UV spectroscopy using STIS of PS16dtm, a recently discovered luminous nuclear transient with unusual properties. We will use the imaging to dramatically refine the location of PS16dtm to assess the nuclear nature of the event. The UV spectrum will allow us to understand the nature of absorption in the UV and extend our spectroscopic comparisons to bluer wavelengths. These HST observations are critical for understanding the origin of this rare transient as a superluminous supernova, tidal disruption event, or AGN variability.

OBSERVING DESCRIPTION

We request one orbit to obtain two observations of PS16dm: a NUV spectrum with STIS/NUV-MAMA and an optical image with STIS/CCD.

Proposal 14902 - Visit 01 - Imaging and UV Spectroscopy of the Luminous and Unique Nuclear Transient PS16dtm

Thu Feb 09 02:01:30 GMT 2017

Visit	Proposal 14902, Visit 01, implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/NUV-MAMA, STIS/CCD Special Requirements: (none)									
	Patterns	#	Primary Pattern			Secondary Pattern			Exposures	
		(1)	Pattern Type=STIS-CCD-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.2835 Line Spacing=0.2835	Coordinate Frame=POS-TARG Pattern Orientation=26.6 Angle Between Sides=143.130102 Center Pattern=false						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PS16DTM	RA: 01 58 4.7390 (29.5197458d) Dec: -00 52 21.73 (-.87270d) Equinox: J2000		V=15.94+/-0.06	Reference Frame: ICRS				
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Acq	(1) PS16DTM	STIS/CCD, ACQ, F28X50LP	MIRROR				10 Secs (10 Secs)	
									[==>]	[1]
	2	Spectrum (STIS.sp.90 4092)	(1) PS16DTM	STIS/NUV-MAMA, ACCUM, 52X0.2	G230L 2376 A				1607 Secs (1607 Secs)	
								[==>]	[1]	
	3	Imaging	(1) PS16DTM	STIS/CCD, ACCUM, 50CCD	MIRROR	CR-SPLIT=NO; GAIN=4		Pattern 1, Exps 3-3 in Visit 01 (1)	20 Secs (80 Secs)	
									[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]

