



16860 - Optical and Infrared imaging of the dark cloud CB 130-3

Cycle: 29, 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) CB130-3 ANY	ACS/WFC WFC3/IR WFC3/UVIS	4	22-Oct-2021 15:00:19.0	yes

4 Total Orbits Used

ABSTRACT

We propose to take broadband optical and infrared images of the dark cloud CB 130-3. Observations will be made in F475W, F606W, F814W, and F125W to complement archival F160W data.

OBSERVING DESCRIPTION

WFC3/IR H-band (F160W) images exist for CB130-3 under program 11618 (PI Tracy Huard). We request 4 orbits to image this nebula in three optical broadband BVI filters (F475W, F606W, F814W) and one additional wide J-band infrared filter (F125W). This will allow us to create two color-composite images: one optical accentuating the gas and obscuring dust, and one near-infrared revealing the stars. For the optical imaging we propose a single WFC3 pointing with a 3-point gap dither to mitigate artifacts such as cosmic rays, hot pixels, and the interchip gap. For the infrared imaging we will perform a 3-point blob dither which is stretched to better match the UVIS field. The central region of the dark nebula will still have the maximum signal-to-noise, which then falls off at the edges which mostly have bright stars in the IR. 4 orbits split between the 4 filters will allow us to match the depth of the archival F160W observations to visually demonstrate the differences between wavelengths at equal exposure times. We will also obtain parallel ACS images with B and I filters. Scheduling will be constrained to match the orientation of the existing WFC3/IR data (HST program 11618) as closely as possible, and preferably not long after the target comes out of solar exclusion in February 2022.

Proposal 16860 - Visit 01 - Optical and Infrared imaging of the dark cloud CB 130-3

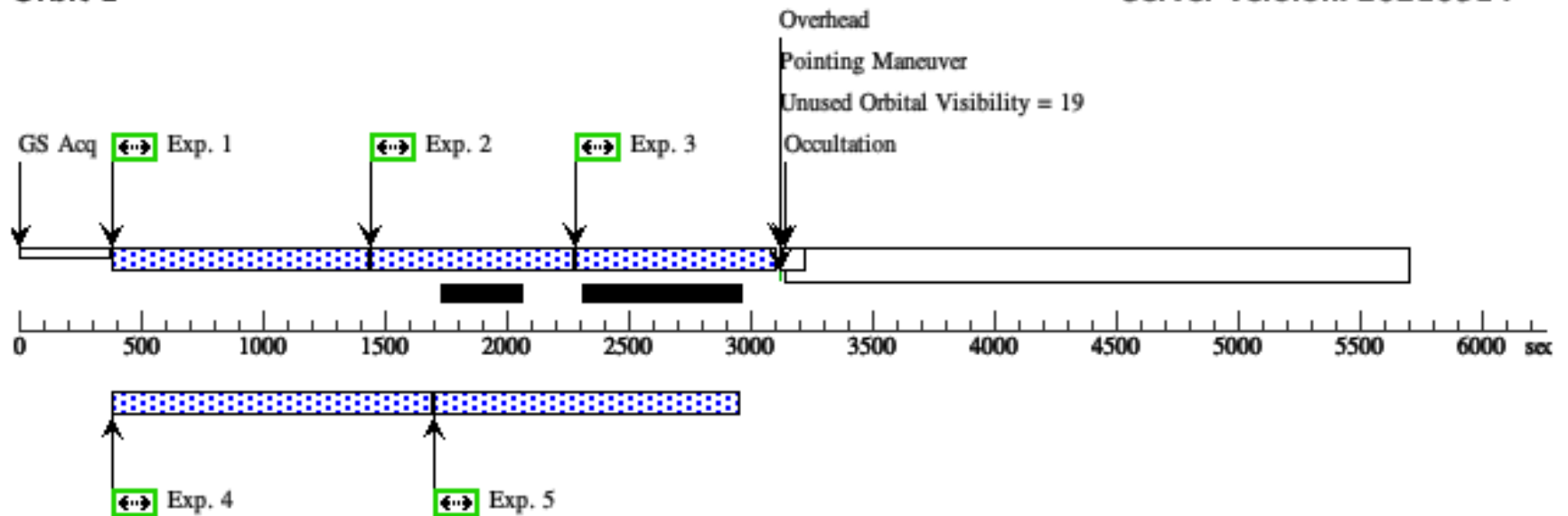
Visit	Proposal 16860, Visit 01 Fri Oct 22 19:00:19 GMT 2021				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 269D TO 275 D				
Patterns	#	Primary Pattern		Secondary Pattern	Exposures
	(1)	Pattern Type=LINE Purpose=DITHER Number Of Points=3 Point Spacing=5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=87 Angle Between Sides= Center Pattern=true		(1-5)
	(2)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=15.5 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.86 Angle Between Sides= Center Pattern=true		(6)
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	CB130-3	RA: 18 16 16.2820 (274.0678417d) Dec: -02 32 34.38 (-2.54288d) Equinox: J2000		V=18+/-4
		Miscellaneous Reference Frame: ICRS			
		Comments: Category=ISM Description=[DARK CLOUD]			

Proposal 16860 - Visit 01 - Optical and Infrared imaging of the dark cloud CB 130-3

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(1) CB130-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F475W	CR-SPLIT=NO		Pattern 1, Exps 1-5 in Visit 01 (1)	900 Secs (2700 Secs)	
								[==>(Pattern 1)]		[1]
								Prime + Parallel Group 1-5 in Pattern 1, Exps 1-5 in Visit 01	[==>(Pattern 2)]	[2]
									[==>(Pattern 3)]	[3]
	2		(1) CB130-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W	CR-SPLIT=NO		Pattern 1, Exps 1-5 in Visit 01 (1)	700 Secs (2100 Secs)	
								[==>(Pattern 1)]		[1]
								Prime + Parallel Group 1-5 in Pattern 1, Exps 1-5 in Visit 01	[==>(Pattern 2)]	[2]
									[==>(Pattern 3)]	[3]
	3		(1) CB130-3	WFC3/UVIS, ACCUM, UVIS-CENTER	F814W	CR-SPLIT=NO		Pattern 1, Exps 1-5 in Visit 01 (1)	800 Secs (2400 Secs)	
								[==>(Pattern 1)]		[1]
								Prime + Parallel Group 1-5 in Pattern 1, Exps 1-5 in Visit 01	[==>(Pattern 2)]	[2]
									[==>(Pattern 3)]	[3]
	4		ANY	ACS/WFC, ACCUM, WFCENTER	F435W			Pattern 1, Exps 1-5 in Visit 01 (1)	1100 Secs (3300 Secs)	
								[==>(Pattern 1)]		[1]
								Prime + Parallel Group 1-5 in Pattern 1, Exps 1-5 in Visit 01	[==>(Pattern 2)]	[2]
									[==>(Pattern 3)]	[3]
	5		ANY	ACS/WFC, ACCUM, WFCENTER	F814W			Pattern 1, Exps 1-5 in Visit 01 (1)	1100 Secs (3300 Secs)	
								[==>(Pattern 1)]		[1]
								Prime + Parallel Group 1-5 in Pattern 1, Exps 1-5 in Visit 01	[==>(Pattern 2)]	[2]
									[==>(Pattern 3)]	[3]
	6		(1) CB130-3	WFC3/IR, MULTIACCUM, IR-FIX	F125W	SAMP-SEQ=STEP100; NSAMP=14		Pattern 2, Exps 6-6 in Visit 01 (2)	799.232938 Secs (2397.699 Secs)	
								[==>(Pattern 1)]		[4]
								[==>(Pattern 2)]		
								[==>(Pattern 3)]		

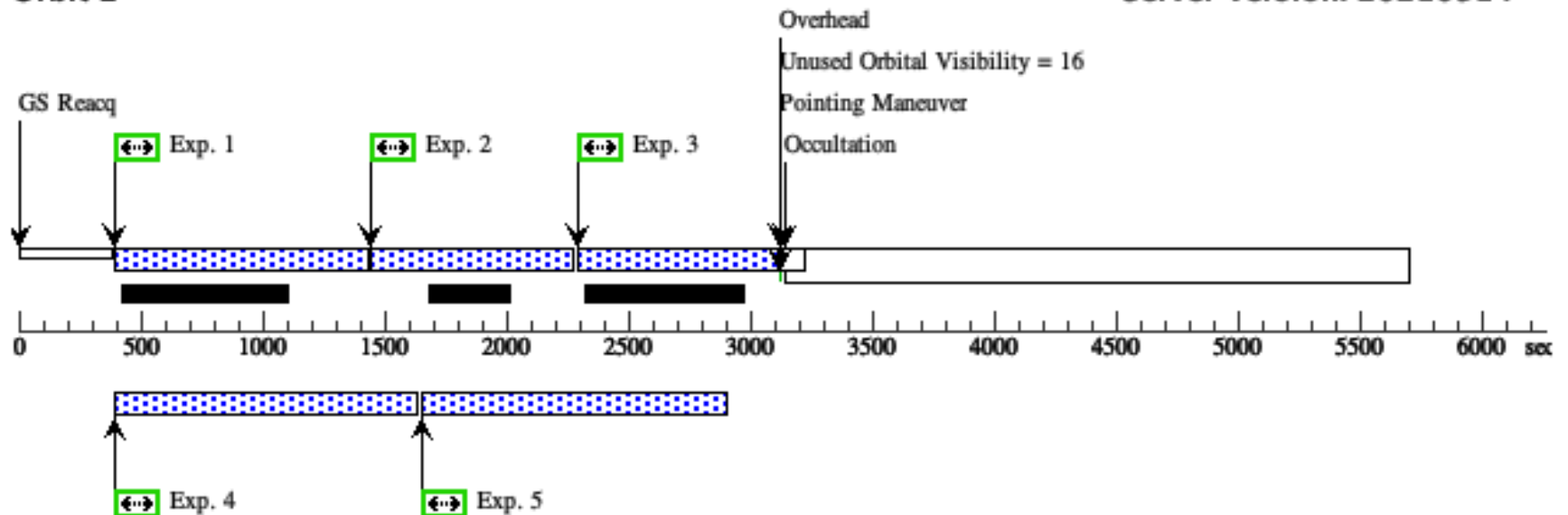
Orbit 1

Server Version: 20210514



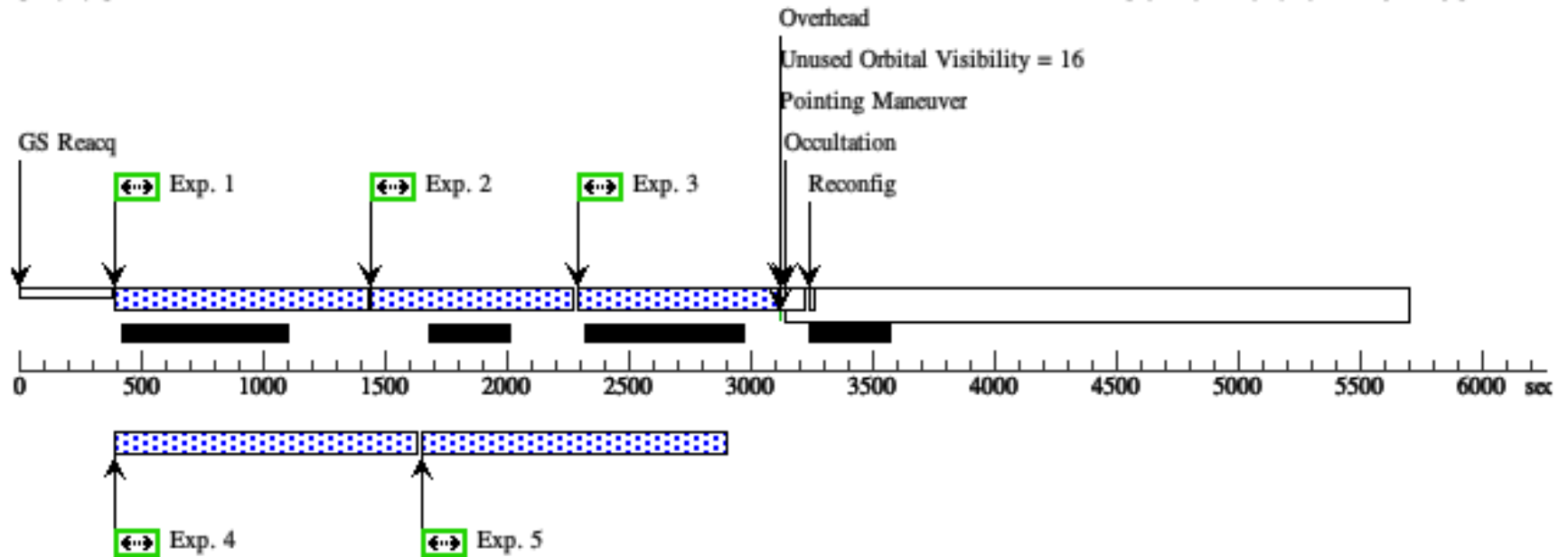
Orbit 2

Server Version: 20210514



Orbit 3

Server Version: 20210514



Orbit 4

Server Version: 20210514

