15597 - Infrared imaging of stellar shading in Serpens Nebula EC 82

Cycle: 25, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) EC-82 ANY	ACS/WFC WFC3/IR	3	09-Aug-2018 13:04:33.0	yes

3 Total Orbits Used

ABSTRACT

We propose infrared imaging of the Serpens Nebula EC 82 to reveal shading by a circumstellar stellar disk around a young stellar object. We expect our observations to reveal new features and add color information to existing archival infrared images. We will also obtain deep narrowband imaging of another part of this molecular cloud with parallel ACS exposures.

OBSERVING DESCRIPTION

We will use a single WFC3/IR pointing matched very closely to the existing H-band (F160W) image from HST program 14181 (PI Thomas Megeath) which is at ORIENT=133 degrees. This ideal orientation is available from late July to mid-August 2018, and other acceptable orientations at 90-degree increments are available later. We will obtain J-band and narrowband [Fe II] images using filters F125W and F164N, respectively, to be combined with the existing H-band image. We will also obtain deep H-alpha plus [N II] images of an adjacent part of the molecular cloud using the ACS in parallel with the F658N filter.

Visit

Proposal 15597, Visit 01, implementation Thu Aug 09 17:04:34 GMT 2018

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 123D TO 143 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=42 Angle Between Sides= Center Pattern=false		(1-3)

Fixed Targets

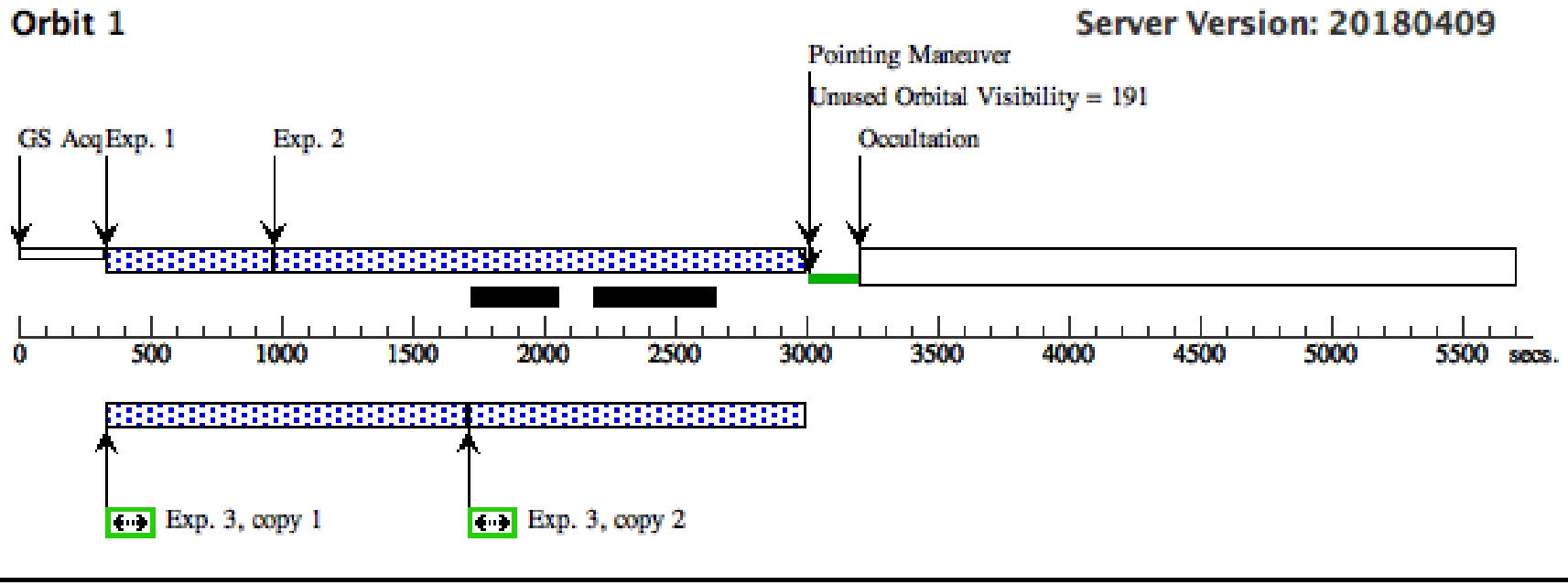
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	EC-82	RA: 18 29 58.6540 (277.4943917d) Dec: +01 14 28.15 (1.24115d) Equinox: J2000		V=35+/-1	Reference Frame: SIMBAD

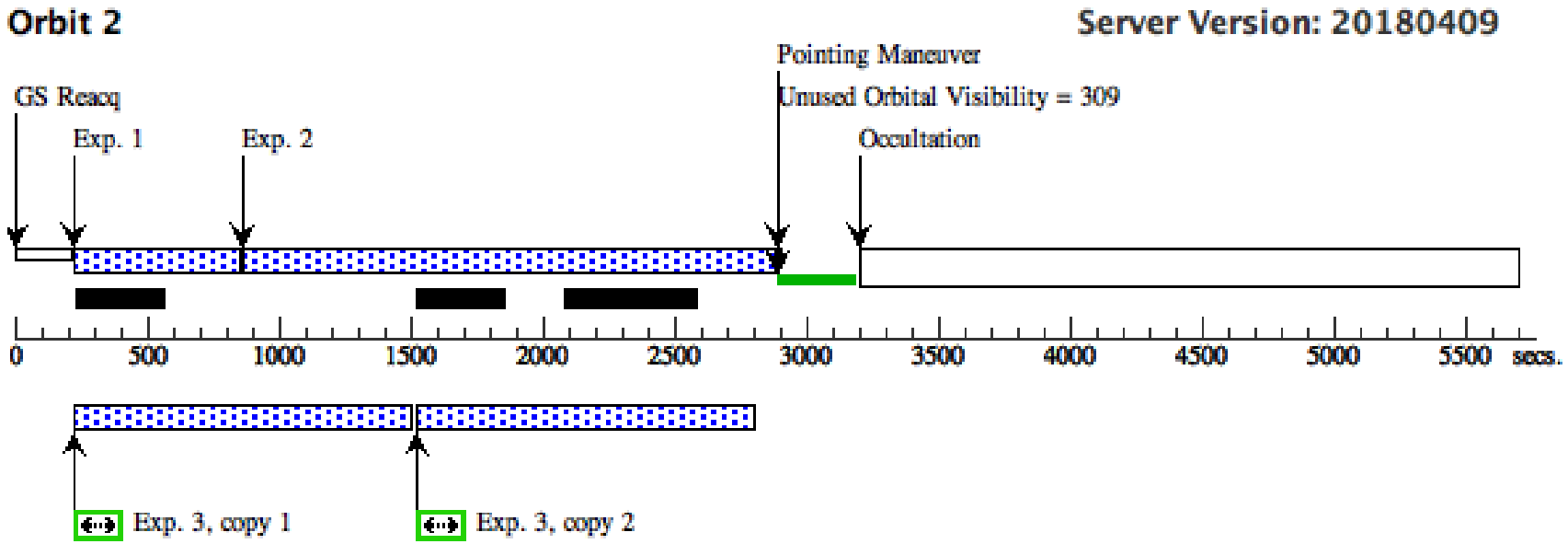
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[CIRCUMSTELLAR MATTER, YSO]
Extended=YES

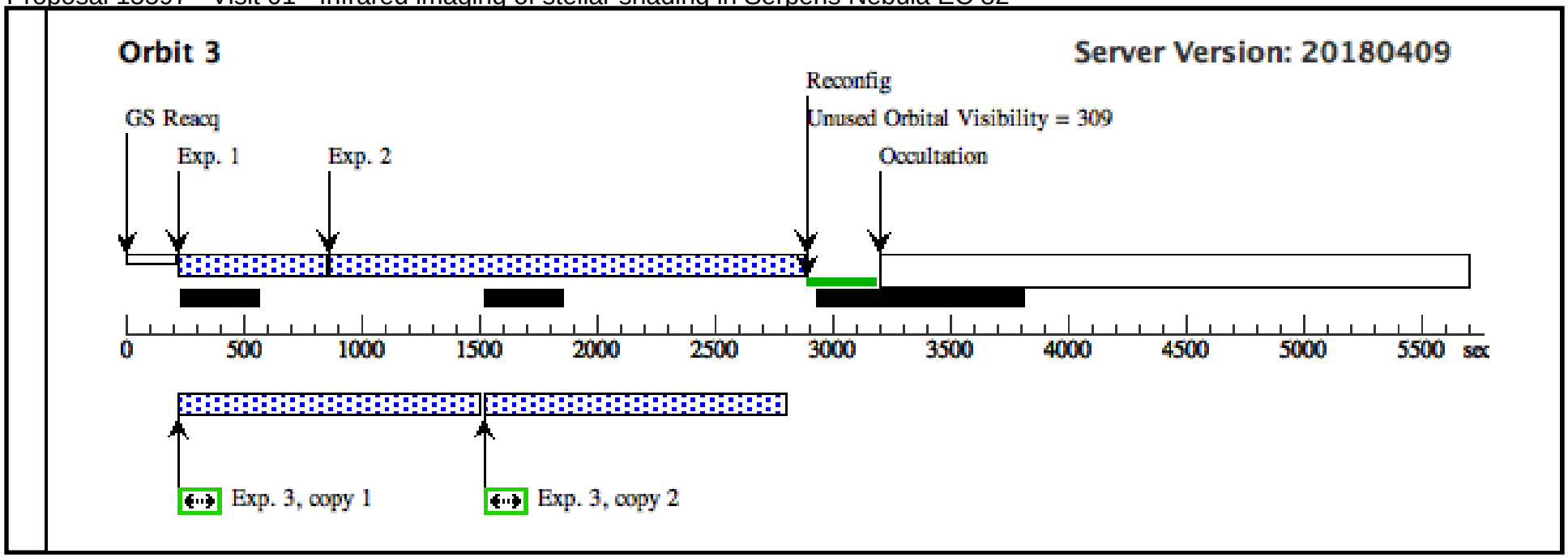
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) EC-82	WFC3/IR, MULTIACCUM, IR-FIX	F125W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 1, Exps 1-3 in Visit 01 (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in Visit 01	599.231134 Secs (1797.693 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	***[2]***
								[==>(Pattern 3)]	***[3]***
2		(1) EC-82	WFC3/IR, MULTIACCUM, IR-FIX	F164N	NSAMP=13; SAMP-SEQ=STEP400		Pattern 1, Exps 1-3 in Visit 01 (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in Visit 01	1999.233383 Secs (5997.7 Secs)	
								[==>(Pattern 1)]	***[1]***
								[==>(Pattern 2)]	***[2]***
								[==>(Pattern 3)]	***[3]***
3		ANY	ACS/WFC, ACCUM, WFCENTER	F658N	CR-SPLIT=NO		Pattern 1, Exps 1-3 in Visit 01 (1) Prime + Parallel Group 1-3 in Pattern 1, Exps 1-3 in Visit 01	1160 Secs X 2 (6960 Secs)	
								[==>(Pattern 1, Copy 1)] *[==>(Pattern 1, Copy 2)]*	***[1]***
								[==>(Pattern 2, Copy 1)] *[==>(Pattern 2, Copy 2)]*	***[2]***
								[==>(Pattern 3, Copy 1)] *[==>(Pattern 3, Copy 2)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20180409
Reconfig
GS Reacq
Unused Orbital Visibility = 309
Exp. 1
Exp. 2
Occultation
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2000
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3000
3500
4000
4500
5000
5500
sec
Exp. 3, copy 1
Exp. 3, copy 2