15429 - Is C60+ present in the diffuse interstellar medium?

Cycle: 25, Proposal Category: GO

(Availability Mode: AVAILABLE)

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) BD+40-4220 NONE WAVE	STIS/CCD	1	12-Dec-2017 14:01:53.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
02	(1) BD+40-4220 NONE WAVE	STIS/CCD	1	12-Dec-2017 14:01:56.0	yes
03	(2) HD-169454 NONE WAVE	STIS/CCD	1	12-Dec-2017 14:02:00.0	yes
04	(3) TAU-CMA CCDFLAT WAVE	STIS/CCD	1	12-Dec-2017 14:02:03.0	yes
05	(4) HD-36960 CCDFLAT WAVE	STIS/CCD	1	12-Dec-2017 14:02:08.0	yes

5 Total Orbits Used

ABSTRACT

New innovations in laboratory spectroscopy at ultra-low temperatures have provided strong evidence for the presence of C60+ (ionized Buckminsterfullerene) in the diffuse interstellar medium (ISM). If confirmed, this discovery would provide a major breakthrough in interstellar chemistry and a potential resolution for the 100-year old diffuse interstellar band (DIB) problem. Although Walker et al. (2015, 2016) claimed its detection, the presence of a crucial absorption band of C60+ at 9428 A was called into question this summer when new spectra were presented by Galazutdinov et al. (2017). Confirming the presence of C60+ now rests on a rigorous detection of this 'missing' 9428 A band, but this region of the spectrum is heavily contaminated in ground-based studies due to strong telluric water vapour absorption. Use of HST is urgently required to obtain robust near-IR interstellar spectra, eliminating the need for error-prone telluric cancellation methods and thus allowing us to definitively confirm or reject the presence of interstellar C60+.

OBSERVING DESCRIPTION

The target stars will be acquired at the center of the 52x0.1" slit (at row 512) then moved to CCD row 300 for the start of the STIS-scan routine. The targets will be exposed while scanning up the slit by 36" to row 1000 (at a rate not exceeding the maximal FGS tracking rate of 4.8"/sec). After readout, the star will be repositioned at row 300 and a second identical science exposure will be performed. Next, a sequence of two

contemporaneous flat-field exposures will be obtained (without moving the slit mechanism), to ensure the closest alignment between the flat and science exposures. This exposure sequence will be repeated one to two more times depending on the amount of remaining time in the orbit. Additional wavecal and fringe flats will be obtained during occultation to improve the flat-field statistics and accuracy of the wavelength scale.

The exposure times are set to reach target S/N > 500 per exposure, so that the sequence of >4 science exposures will result in total counts equivalent to S/N > 900 (allowing for ~10% flux losses due to scattered light not accounted for by the ETC). Individual exposure times can exceed the nominal pixel saturation limit given by the ETC because the counts will be spread over 700 (spatial) rows (instead of the 7 assumed by the ETC).

Proposal 15429 - Visit 01 - Is C60+ present in the diffuse interstellar medium?

Visit

Proposal 15429, Visit 01, implementation Tue Dec 12 19:02:10 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: Period 6.598074 D AND ZERO-PHASE HJD2456103.646

Diagnostics

(Visit 01) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 01) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 01) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 01) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

Fixed Targets

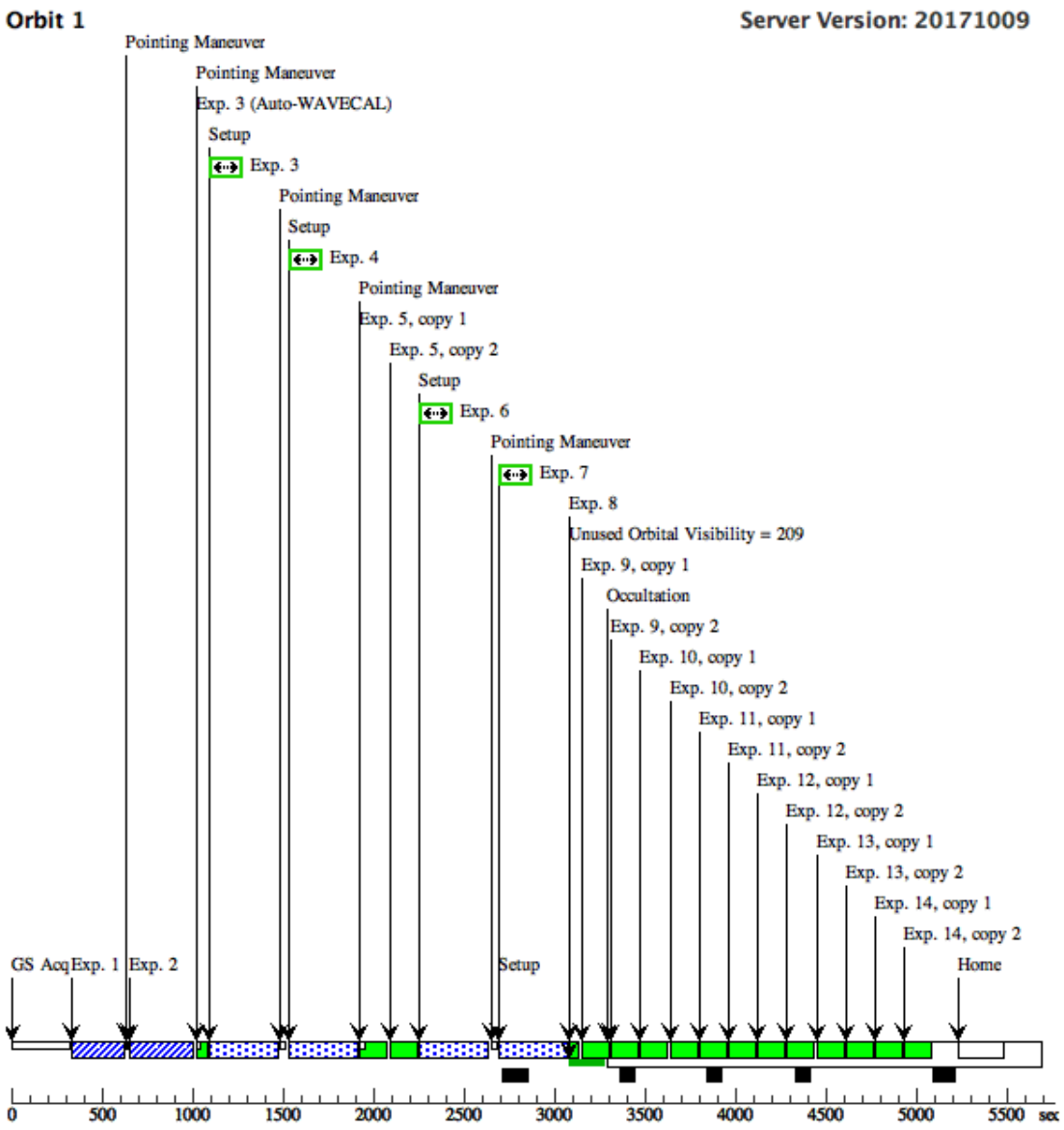
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BD+40-4220	RA: 20 32 22.4234 (308.0934308d) Dec: +41 18 18.96 (41.30527d) Equinox: J2000		V=9.12 J=5.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[OF, SUPERGIANT O]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ BD+40 (STIS.im.1035907)	(1) BD+40-4220	STIS/CCD, ACQ, F28X50OIII	MIRROR		PHASE 0.2 TO 0.35		4.5 Secs (4.5 Secs) *[==>]*	***[1]***
2	ACQ-peak BD+40 (STIS.sp.1035913)	(1) BD+40-4220	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 9336 A				1 Secs (1 Secs) *[==>]*	***[1]***
3	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	***[1]***
4	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	***[1]***
5	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	***[1]***
7	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	***[1]***
8	Extra wavecal	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				10 Secs (10 Secs) *[==>]*	***[1]***
9	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
10	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
11	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
12	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
13	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
14	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Orbit Structure



Proposal 15429 - Visit 02 - Is C60+ present in the diffuse interstellar medium?

Visit

Proposal 15429, Visit 02, implementation Tue Dec 12 19:02:10 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: Period 6.598074 D AND ZERO-PHASE HJD2456103.646

Diagnostics

(Visit 02) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 02) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 02) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 02) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

Fixed Targets

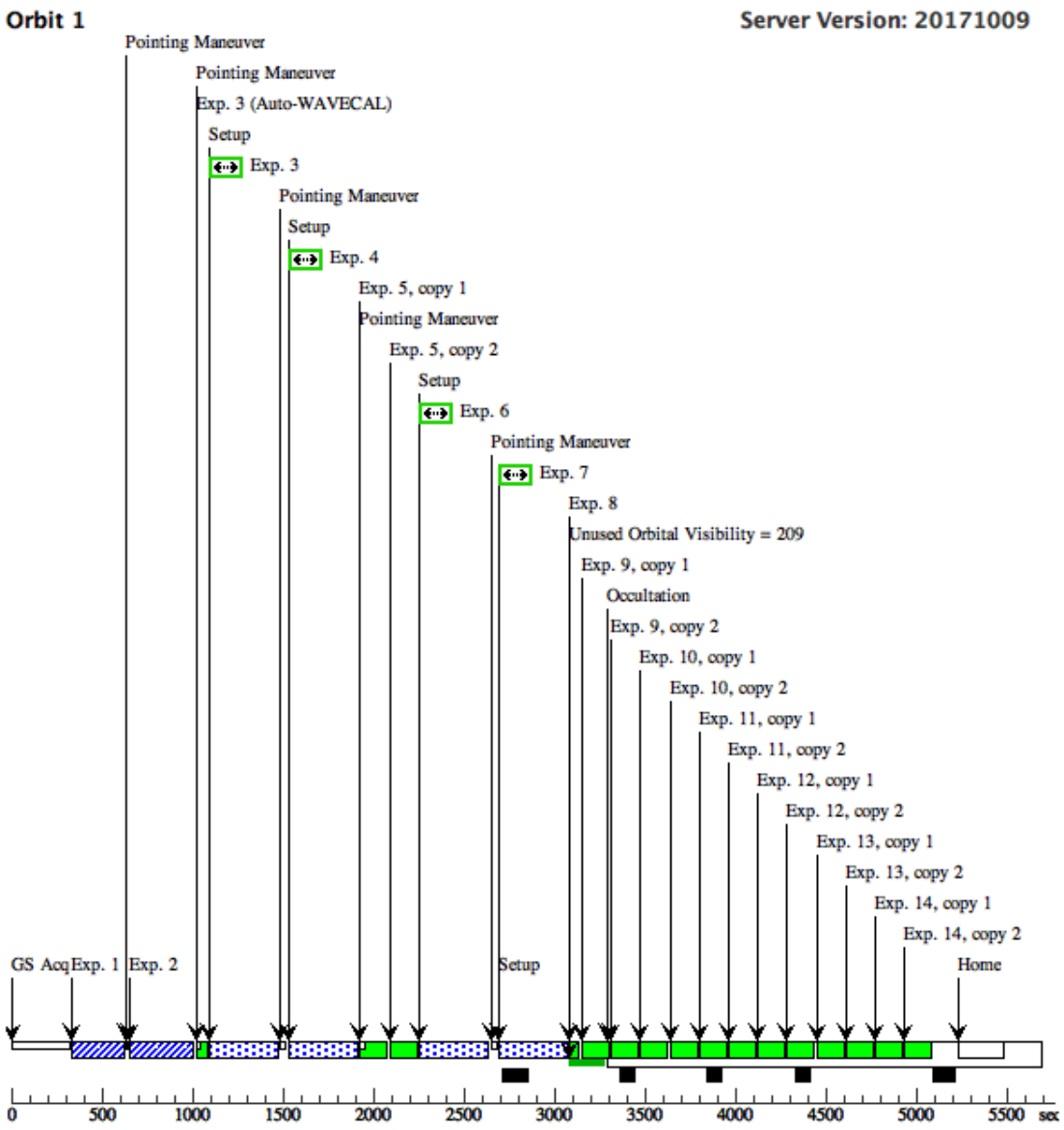
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BD+40-4220	RA: 20 32 22.4234 (308.0934308d) Dec: +41 18 18.96 (41.30527d) Equinox: J2000		V=9.12 J=5.2	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[OF, SUPERGIANT O]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ BD+40 (STIS.im.1035907)	(1) BD+40-4220	STIS/CCD, ACQ, F28X50OIII	MIRROR		PHASE 0.7 TO 0.85		4.5 Secs (4.5 Secs) *[==>]*	*[1]*
2	ACQ-peak BD+40 (STIS.sp.1035913)	(1) BD+40-4220	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 9336 A				1 Secs (1 Secs) *[==>]*	*[1]*
3	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	*[1]*
4	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	*[1]*
5	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
6	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	*[1]*
7	BD+40 scan up (STIS.sp.1035904)	(1) BD+40-4220	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.1 06,90.0 Degrees,Forward		340 Secs (340 Secs) *[==>]*	*[1]*
8	Extra wavecal	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				10 Secs (10 Secs) *[==>]*	*[1]*
9	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
10	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
11	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
12	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
13	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
14	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			80 Secs X 2 (160 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

Orbit Structure



Visit

Proposal 15429, Visit 03, implementation Tue Dec 12 19:02:11 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Diagnostics

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

(Visit 03) Warning (Orbit Planner): MISSING FRINGE FLAT CALIBRATION

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD-169454	RA: 18 25 15.1938 (276.3133075d) Dec: -13 58 42.31 (-13.97842d) Equinox: J2000		V=6.71 J=4.5	Reference Frame: ICRS

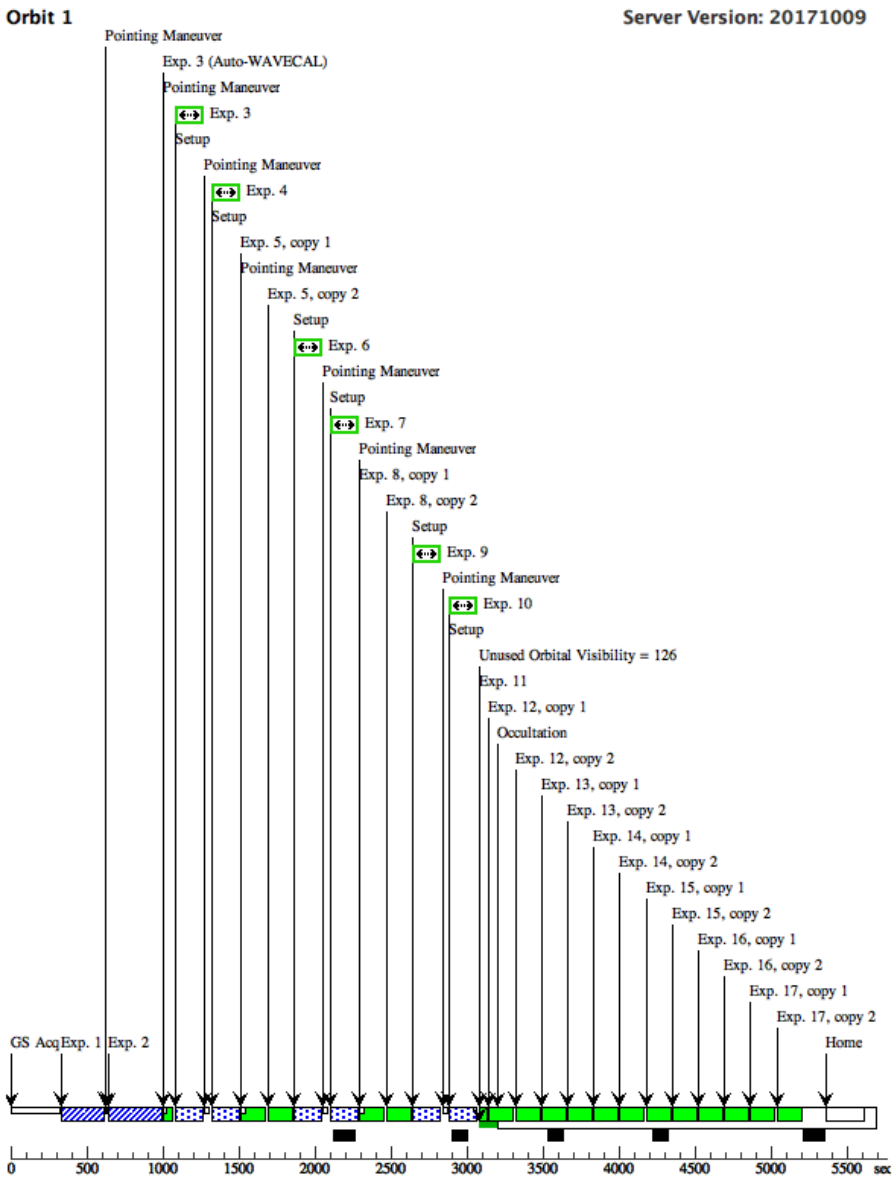
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[B0-B2 III-I]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ HD169454 (STIS.im.1035926)	(2) HD-169454	STIS/CCD, ACQ, F28X50OIII	MIRROR				1 Secs (1 Secs) *[==>]*	***[1]***
2	ACQ-peak HD169454 (STIS.sp.1035927)	(2) HD-169454	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 9336 A				1 Secs (1 Secs) *[==>]*	***[1]***
3	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
4	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
5	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
7	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
8	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
9	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
10	HD169454 scan up (STIS.sp.1035925)	(2) HD-169454	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.257,90.0 Degrees,Forward		140 Secs (140 Secs) *[==>]*	***[1]***
11	Extra wavecal	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				10 Secs (10 Secs) *[==>]*	***[1]***
12	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
13	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
14	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4			90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

	15	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4	90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	 ***[1]***
	16	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4	90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	 ***[1]***
	17	Flats	NONE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	LAMP=TUNGSTEN; GAIN=4	90 Secs X 2 (180 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]*	 ***[1]***

Orbit Structure



Proposal 15429 - Visit 04 - Is C60+ present in the diffuse interstellar medium?

Visit

Proposal 15429, Visit 04, implementation Tue Dec 12 19:02:11 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	TAU-CMA	RA: 07 18 42.4864 (109.6770267d) Dec: -24 57 15.74 (-24.95437d) Equinox: J2000		V=4.4 J=4.7	Reference Frame: ICRS

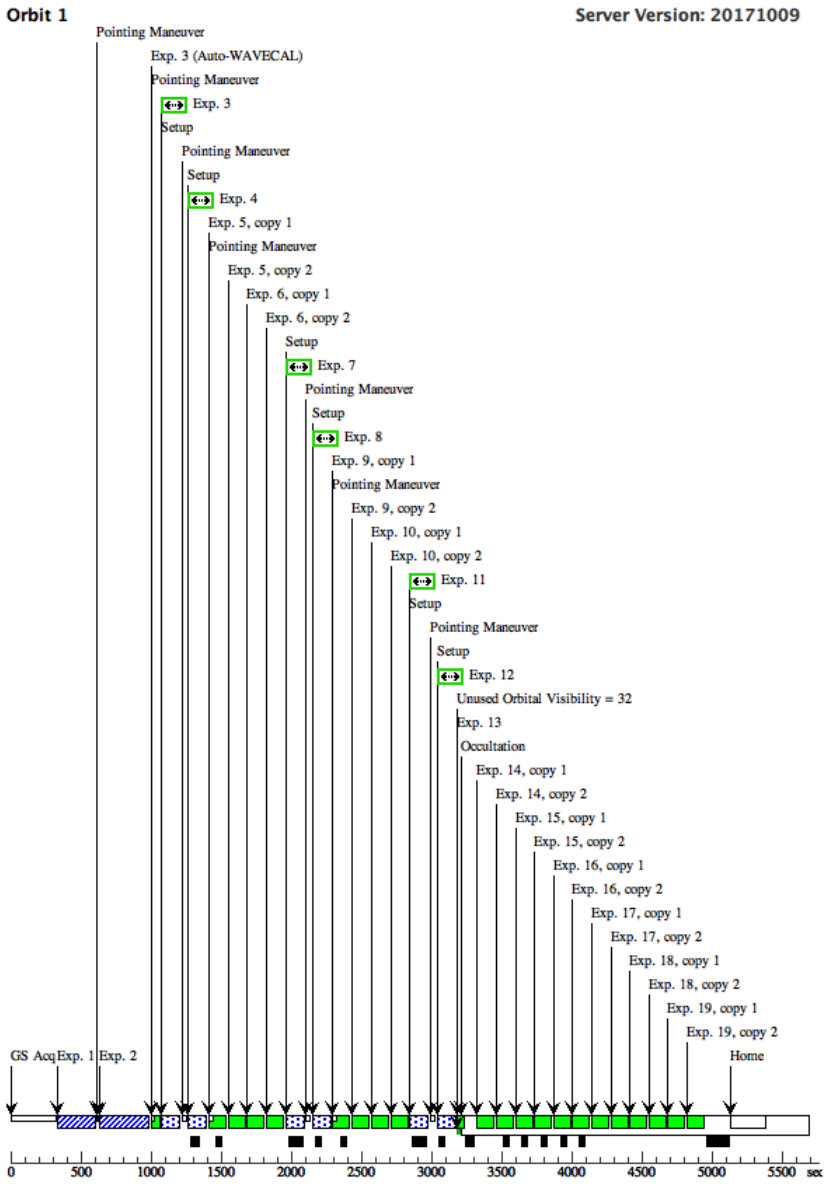
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[SUPERGIANT O]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ tau-Cma (STIS.im.1035934)	(3) TAU-CMA	STIS/CCD, ACQ, F28X50OIII	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	ACQ-peak tau-Cma (STIS.sp.1035933)	(3) TAU-CMA	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 9336 A				1 Secs (1 Secs) *[==>]*	*[1]*
3	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
4	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
5	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
6	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
7	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
8	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
9	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
10	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
11	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
12	tau-Cma scan up (STIS.sp.1035935)	(3) TAU-CMA	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
13	Extra wavecal	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				10 Secs (10 Secs) *[==>]*	*[1]*
14	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
15	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

	16	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	17	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	18	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	19	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Orbit Structure



Proposal 15429 - Visit 05 - Is C60+ present in the diffuse interstellar medium?

Visit

Proposal 15429, Visit 05, implementation Tue Dec 12 19:02:11 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD-36960	RA: 05 35 2.6807 (83.7611696d) Dec: -06 00 7.30 (-6.00203d) Equinox: J2000		V=4.72 J=5.3	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[B0-B2 V-IV]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ HD36960 (STIS.im.1035937)	(4) HD-36960	STIS/CCD, ACQ, F28X50OIII	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	ACQ-peak HD36960 (STIS.sp.1035939)	(4) HD-36960	STIS/CCD, ACQ/PEAK, 52X0.1	G750M 9336 A				1 Secs (1 Secs) *[==>]*	*[1]*
3	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
4	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
5	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
6	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
7	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
8	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
9	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
10	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
11	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
12	HD36960 scan up (STIS.sp.1035938)	(4) HD-36960	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	CR-SPLIT=NO; GAIN=4	POS TARG 0,-12; SPATIAL SCAN 0.4,90.0 Degrees,Forward		90 Secs (90 Secs) *[==>]*	*[1]*
13	Extra wavecal	WAVE	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				10 Secs (10 Secs) *[==>]*	*[1]*
14	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*
15	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	*[1]*

	16	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	17	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	18	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
	19	Flats	CCDFLAT	STIS/CCD, ACCUM, 52X0.1	G750M 9336 A	*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***

Orbit Structure