

COS-GTO: Brown Dwarf Activity

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Scientific Category: COOL STARS

Scientific Keywords: ATMOSPHERES AND CHROMOSPHERES, STELLAR ACTIVITY, VERY LOW
MASS STARS AND BROWN DWARFS, ACCRETION DISKS

Abstract

COS will obtain ultraviolet spectra of a representative sample of brown dwarfs to study such questions as:

- (1) Is the hot gas in the outer atmospheres of young brown dwarfs heated by accretion?
- (2) Is the molecular hydrogen emission due to Lyman-alpha fluorescence or collisional excitation?
- (3) Are the older brown dwarfs without disks low mass analogs of active M dwarfs with flares and transient heating?
- (4) Are young brown dwarfs with disks low mass analogs of classical T Tauri stars?

Investigators:

	Investigator	Institution	Country
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CoI#&	Dr. Cynthia Froning	University of Colorado at Boulder	USA/CO

Number of investigators: 2

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Target Summary:

Target	RA	Dec	Magnitude
1207334-393254	12 07 33.4000	-39 32 54.00	V = 19.9 +/- 1.0
VB-10	19 16 57.6200	+05 09 2.20	V = 17.3 +/- 0.2
LHS1070C	00 24 44.2000	-27 08 25.00	V = 17.7 +/- 1.0
1507476-162738	15 07 47.6000	-16 27 38.00	V = 18.8 +/- 1.0
1315309-264951	13 15 30.9000	-26 49 51.00	V = 21.0 +/- 1.0
0255035-470050	02 55 3.5000	-47 00 50.00	V = 19.2 +/- 1.0

Observing Summary:

Target	Config Mode and Spectral Elements	Flags	Orbits
1207334-393254	COS/FUV Spectroscopic G130M		3
1207334-393254	COS/FUV Spectroscopic G160M		3
1207334-393254	COS/FUV Spectroscopic G140L		3
VB-10	COS/FUV Spectroscopic G140L		2
LHS1070C	COS/FUV Spectroscopic G140L		2
1507476-162738	COS/FUV Spectroscopic G140L		2
1315309-264951	COS/FUV Spectroscopic G140L		2
0255035-470050	COS/FUV Spectroscopic G140L		2
VB-10	COS/FUV Spectroscopic G130M		10
			(5x2)

Total prime orbits: 29

This is a COS GTO project, no scientific justification is needed.