

ON THE CIRCUM(SUB)STELLAR ENVIRONMENT OF BROWN DWARFS IN TAURUS .

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There is now ample evidence that like their more massive counterparts, Taurus brown dwarfs (BD) experience a TTS phase. This shows as broad asymmetric $H\alpha$ emission profiles characteristic of accretion. L band excesses have been detected in Taurus substellar sources, indicating a disk frequency $\approx 50\%$. It has often been argued that the presence of accretion/outflow activity in BDs would be evidence that brown dwarfs form like stars (i.e. are not ejected). However, even truncated disks in ejected objects can survive for a few Myr, a period consistent with Taurus age. There is a priori no contradiction between brown dwarf ejection and presence of (presumably small) accretion disks at a few Myr age. In

this poster, we present a study of disks around two dozens Taurus BDs. We have combined optical (Guieu et al. 2006), JHK 2MASS, recent spitzer IRAC (3.6, 4.5, 5.8 & 8.0 μm) and MIPS (24 and 70 μm) data to draw the full SEDs of 23 of the 33 currently known BDs in the Taurus cloud, from the visible to the far infrared. In each object, we infer the presence of a disk from the comparison of the SED to a BD photosphere model (Allard et al. 2000). BDs with infrared excess are fitted with a disk model (Pinte et al. 2006) and inner disk parameters are derived. We investigate the fraction of disk around brown dwarf which appear to change among Taurus filament.