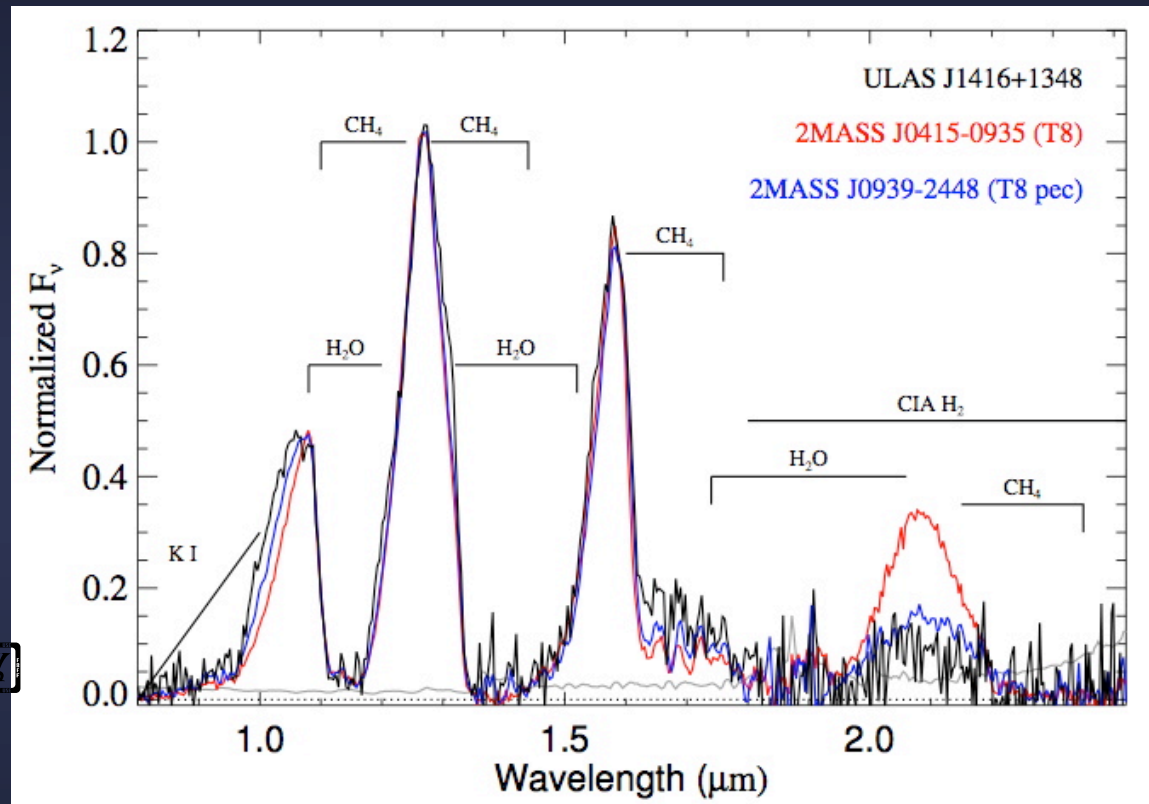
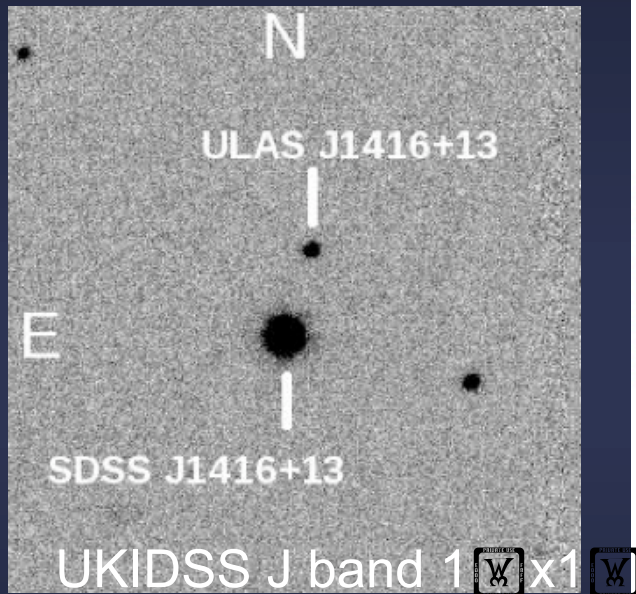


# A Very Cool Blue Brown Dwarf

- Burgasser *et al.* ApJ 2010 (accepted Feb 22)
- Very low temperature brown dwarf candidate found as companion to L6 dwarf in UKIDSS data (Scholz 2010, Burningham *et al.* 2010, Bowler *et al.* 2010)
- Possible Y dwarf? ( $J=17.4$ ,  $H=17.6$ ,  $K=18.9$ )
- Spectrum ( $R\sim 100$ ) obtained with SpeX (Jan 23)

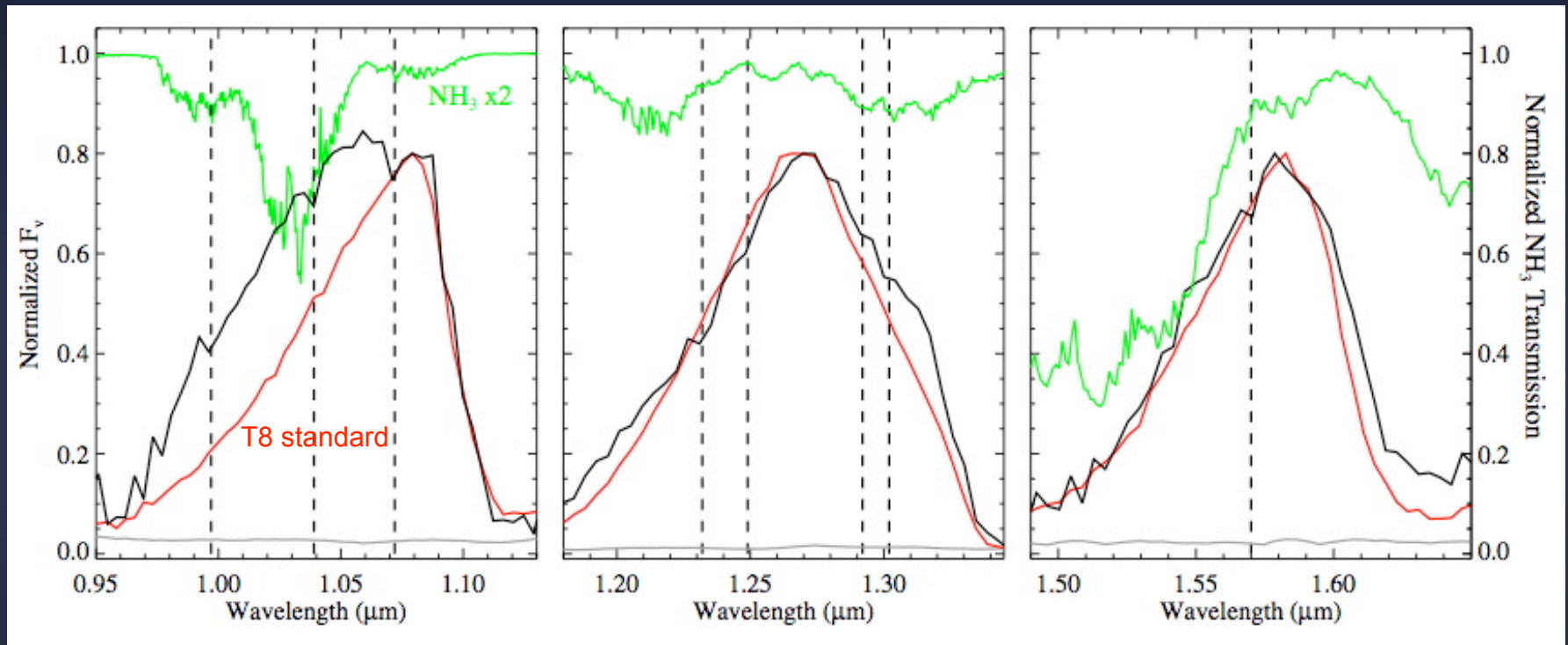
# A Very Cool Blue Brown Dwarf



Unusual broadened Y band and suppressed K band peaks

Best fit: T7.5, high surface gravity, subsolar metal,  $T_{\text{eff}}$  600 K

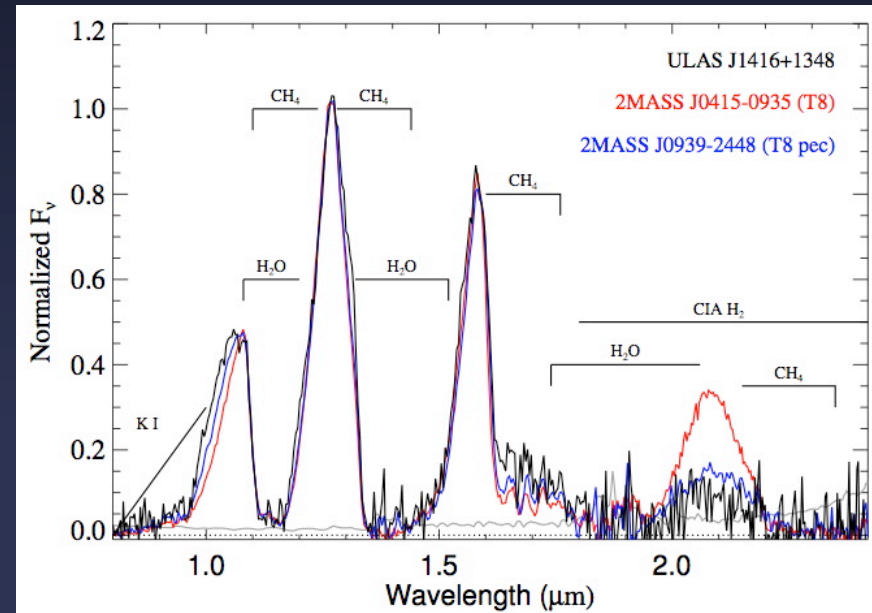
# A Very Cool Blue Brown Dwarf



Signs of  $\text{NH}_3$  absorption? 1.072, 1.232, and 1.057  $\mu\text{m}$   
also seen in Jupiter (IRTF Spectral Library)

# A Very Cool Blue Brown Dwarf

IRTF: 6000 s  
R ~ 90-210  
(Burgasser *et al.* 2010)



Subaru: 2x 3000 s  
R ~ 100  
(Burningham *et al.* 2010)

