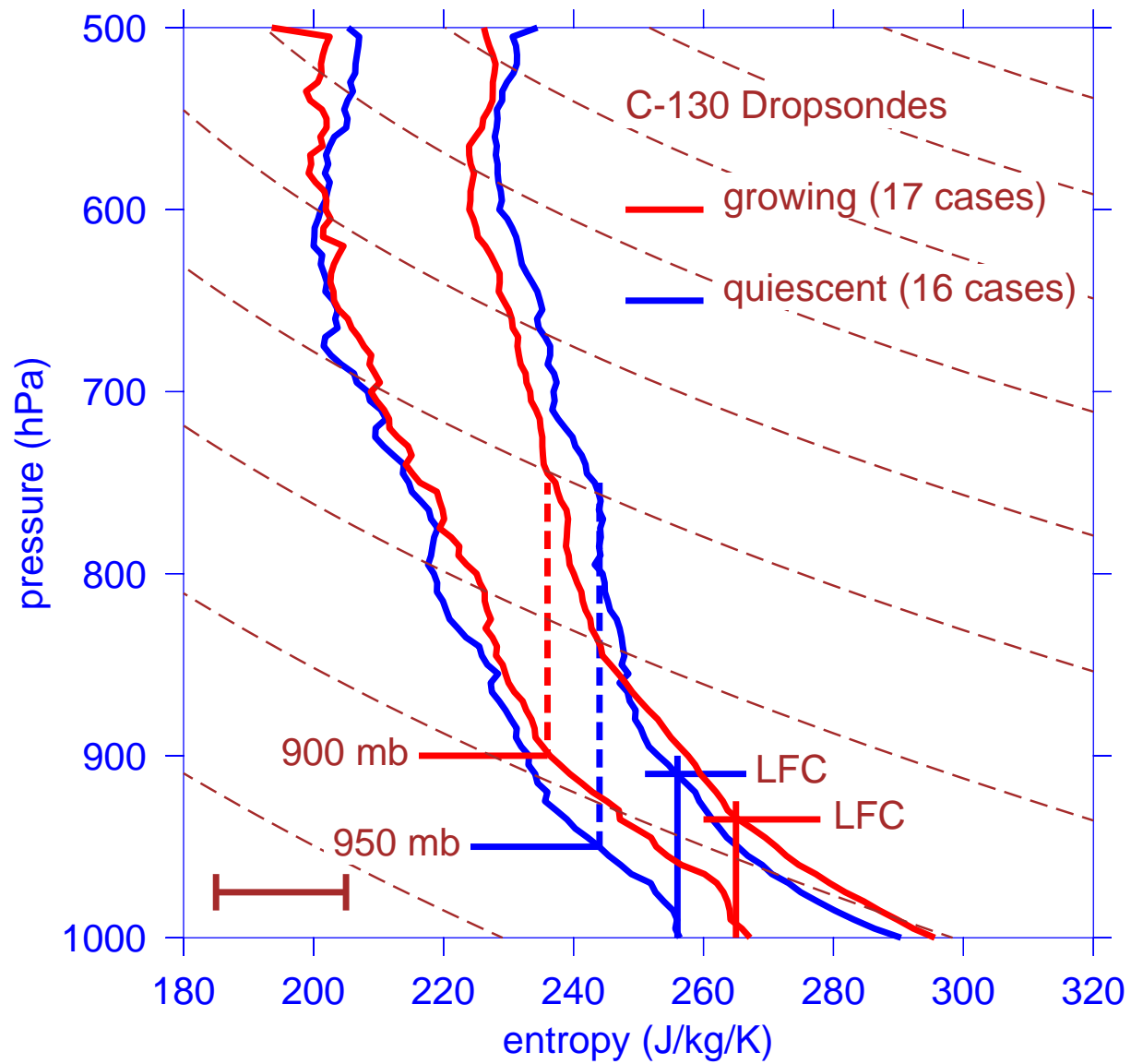


What Have We Learned About Cumulus Forcing?

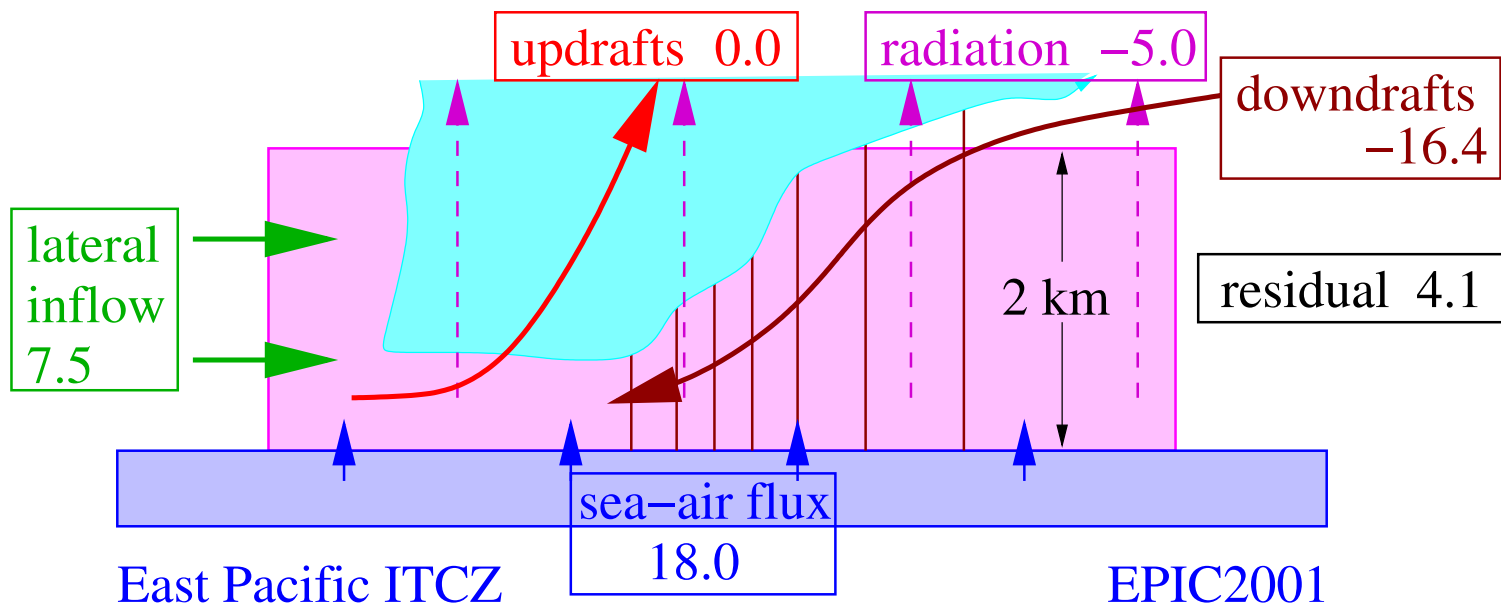
D. Raymond, G. Raga, C. Bretherton, J. Molinari, C. López
Carrillo, Z. Fuchs

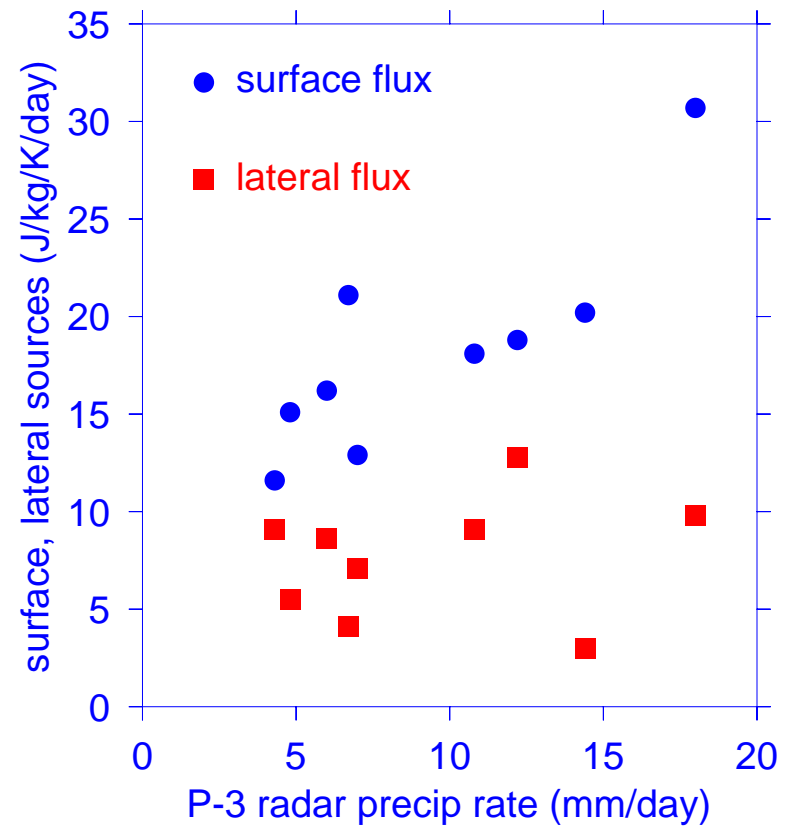
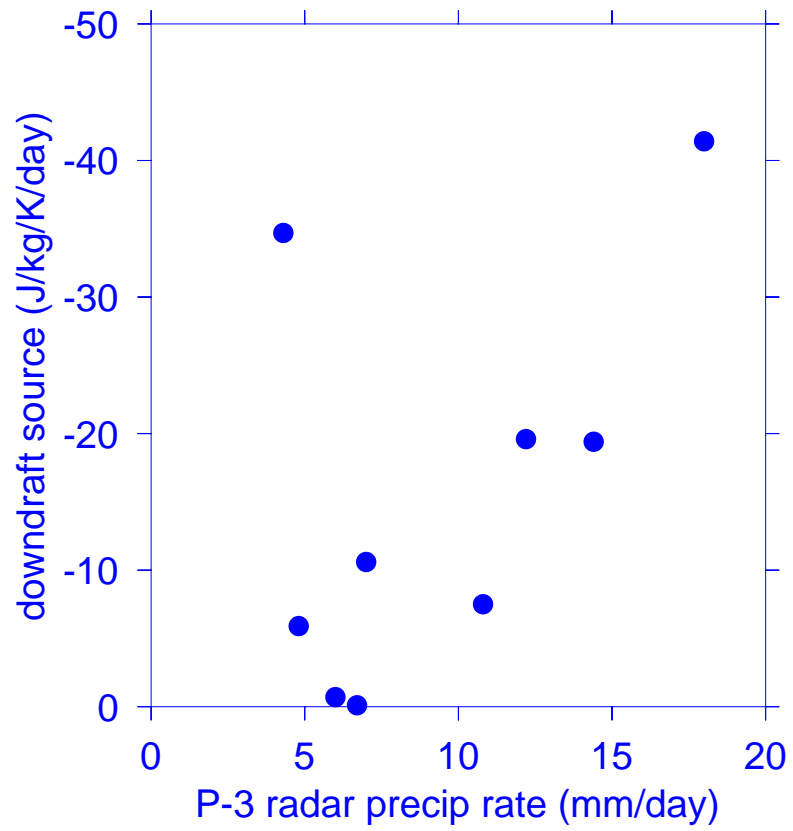
EPIC2001 supported by the U. S. National Science Foundation,
the National Oceanic and Atmospheric Administration, and the
Consejo Nacional de Ciencia y Tecnología de México



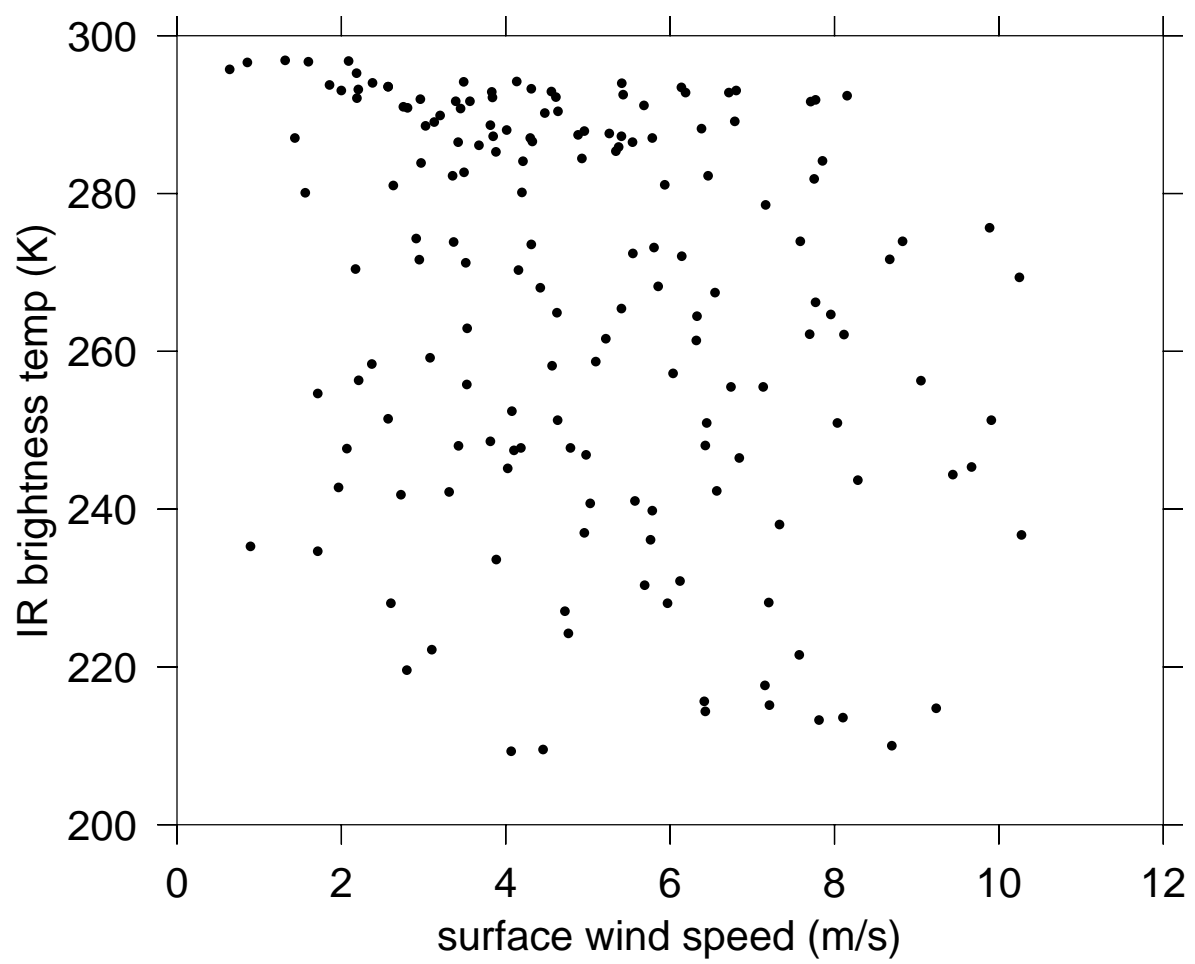
Budget of moist entropy anomaly of PBL (P-3 surveys)

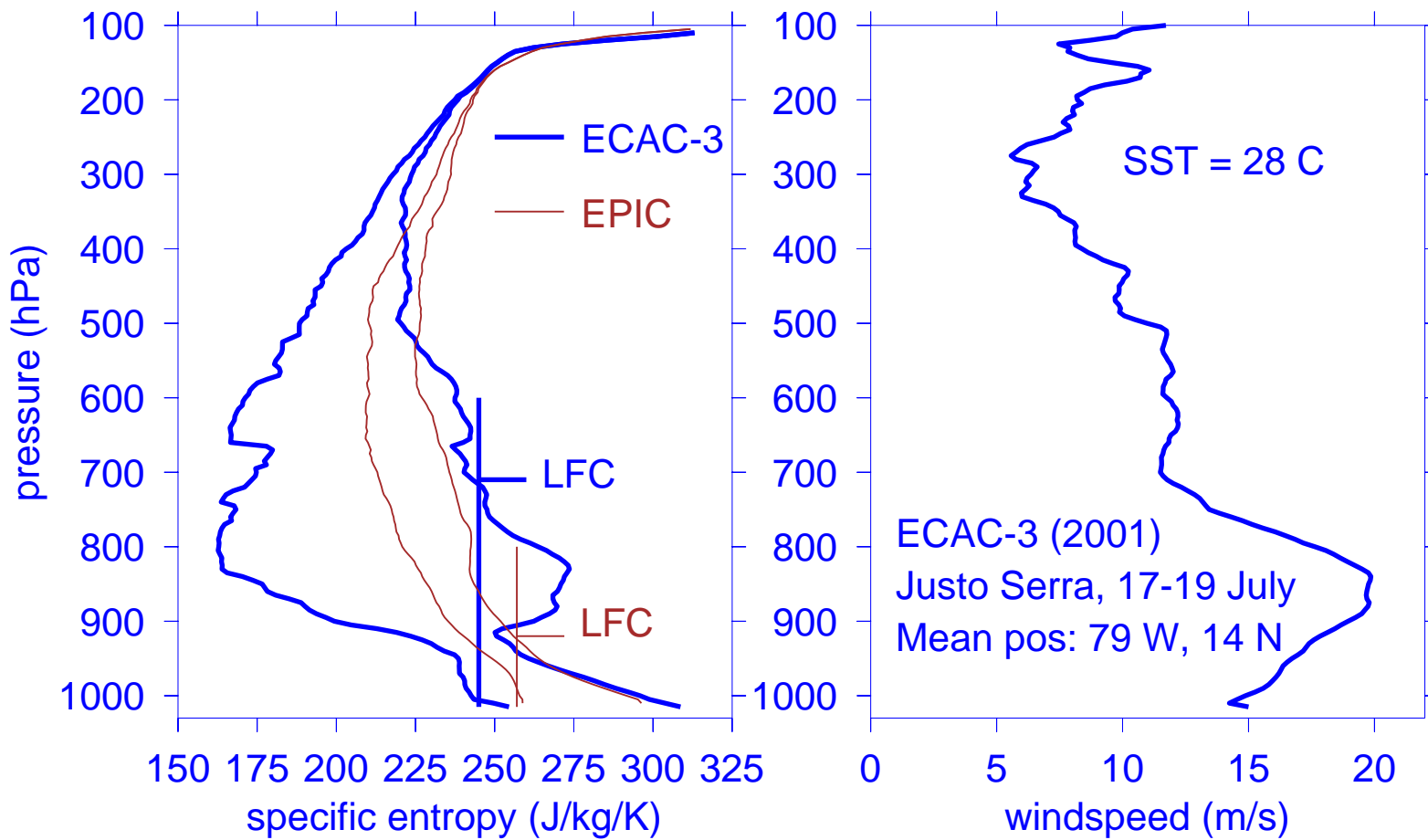
$s' = s - s_u$ (J/kg/K/day) Updrafts zero by design



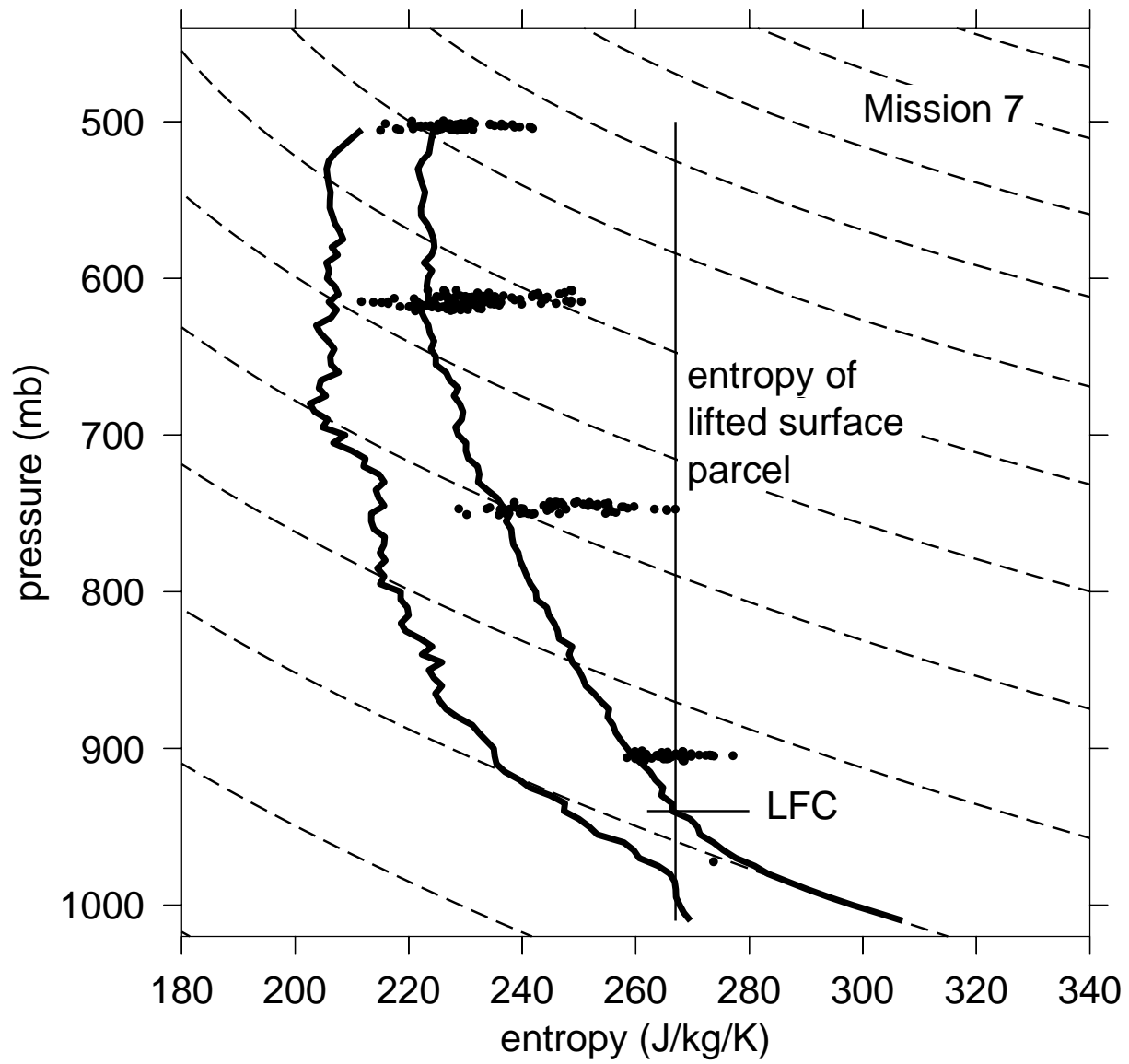


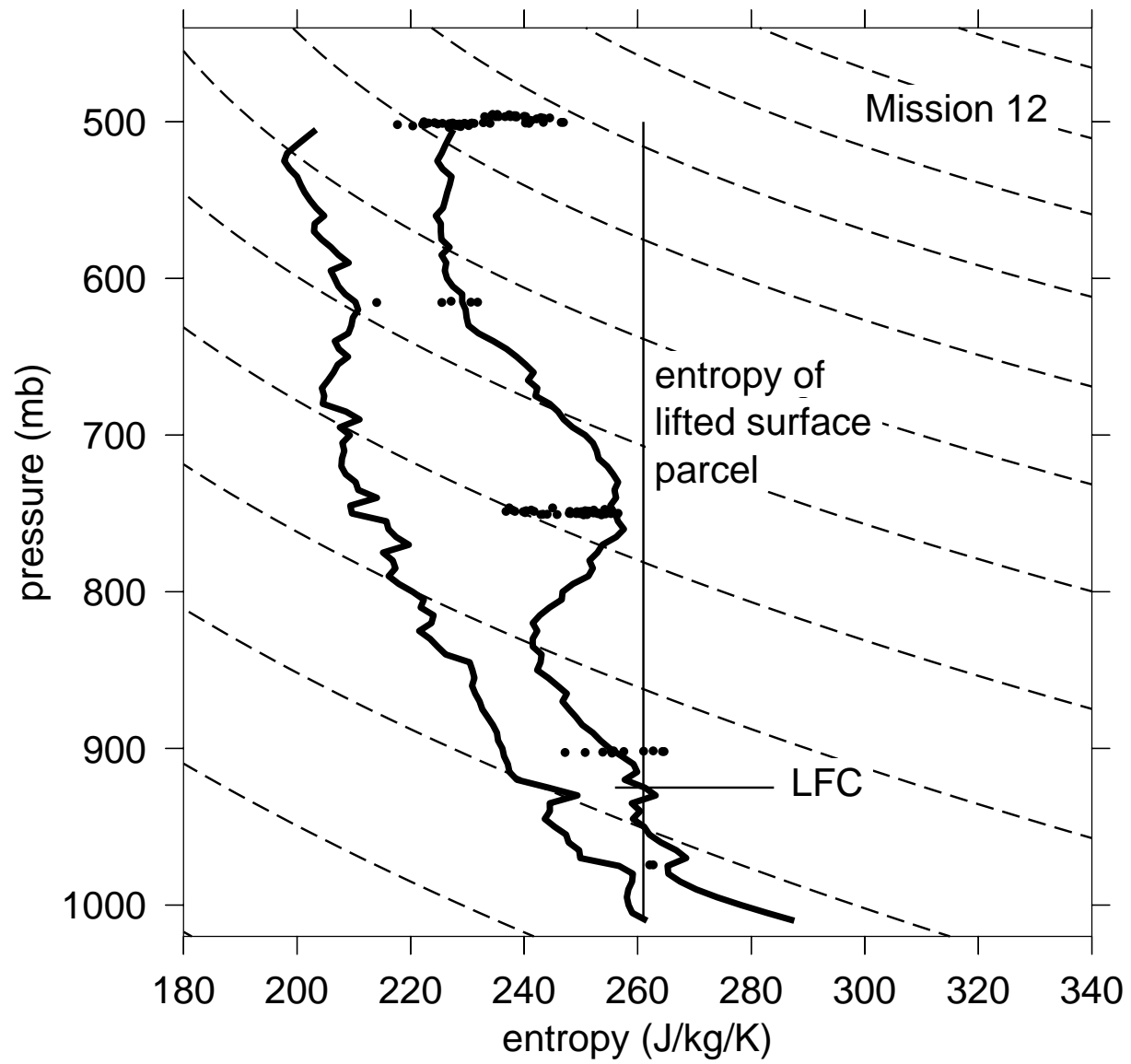
EPIC2001: P-3 dropsondes 93-97 W, 8-12 N





Courtesy of Daniel Martínez (Cuba), Victor Magaña (México)





Conclusions

- Deep convection is largely controlled by CIN, not CAPE or PBL convergence in EPIC region.
- Updrafts draw from deep layer, not just sub-cloud layer; important in defining CIN, CAPE.
- PBL entropy balance – one side of CIN.
- Stable layers above PBL – other side of CIN. Origin???