10 Years of Water Vapor and Ozone Soundings at Costa Rica

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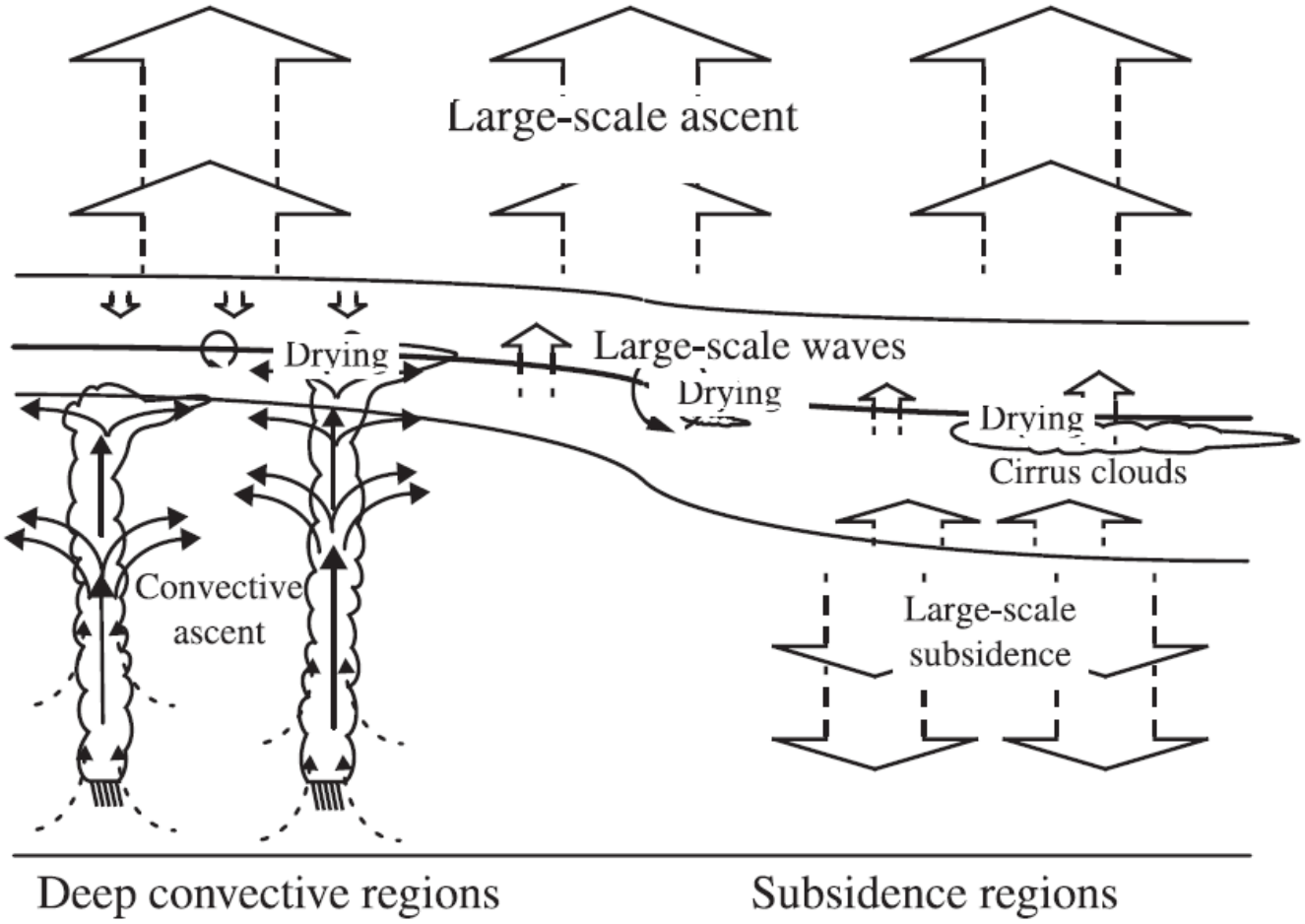
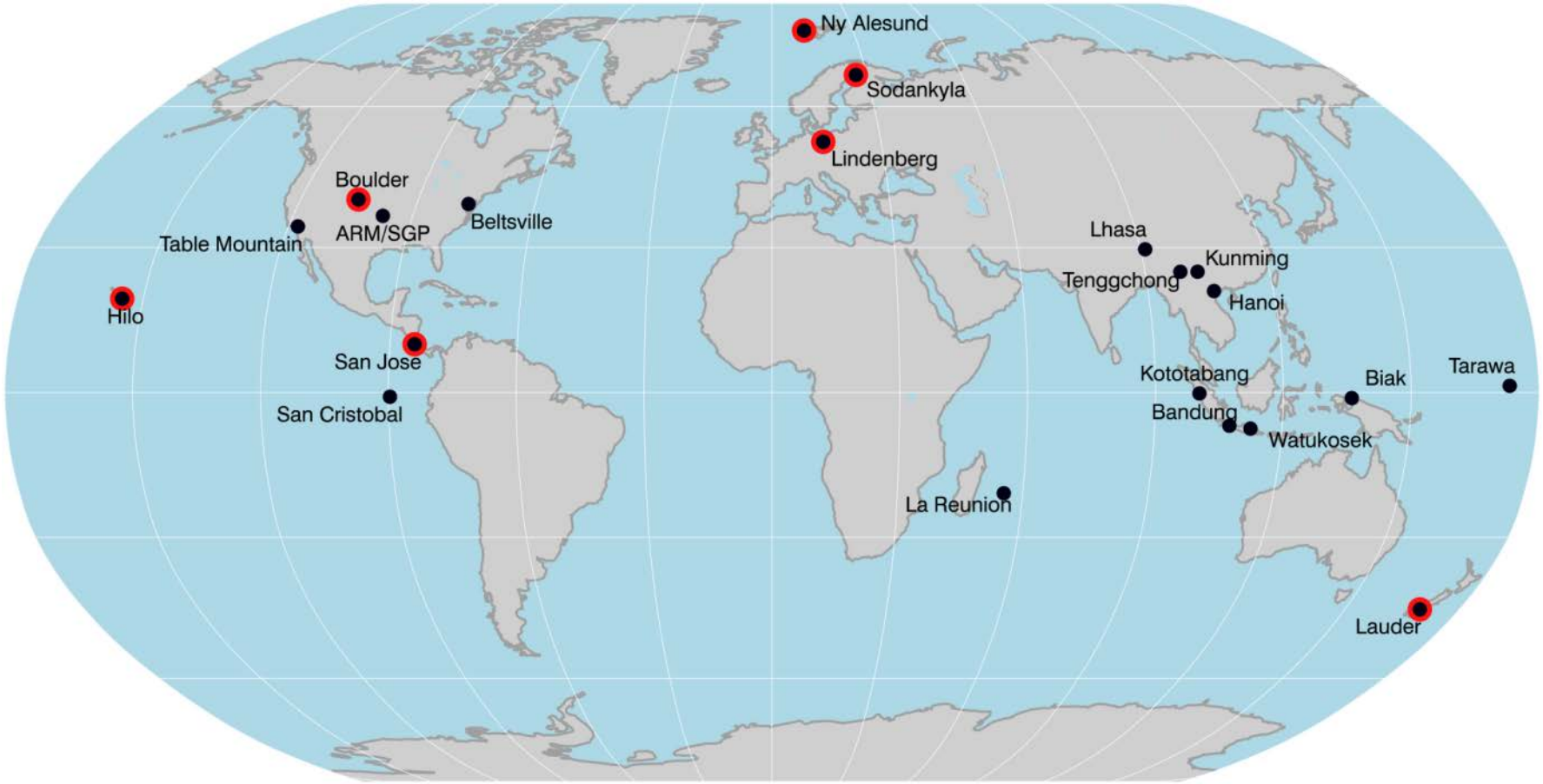
Different regions in the tropics



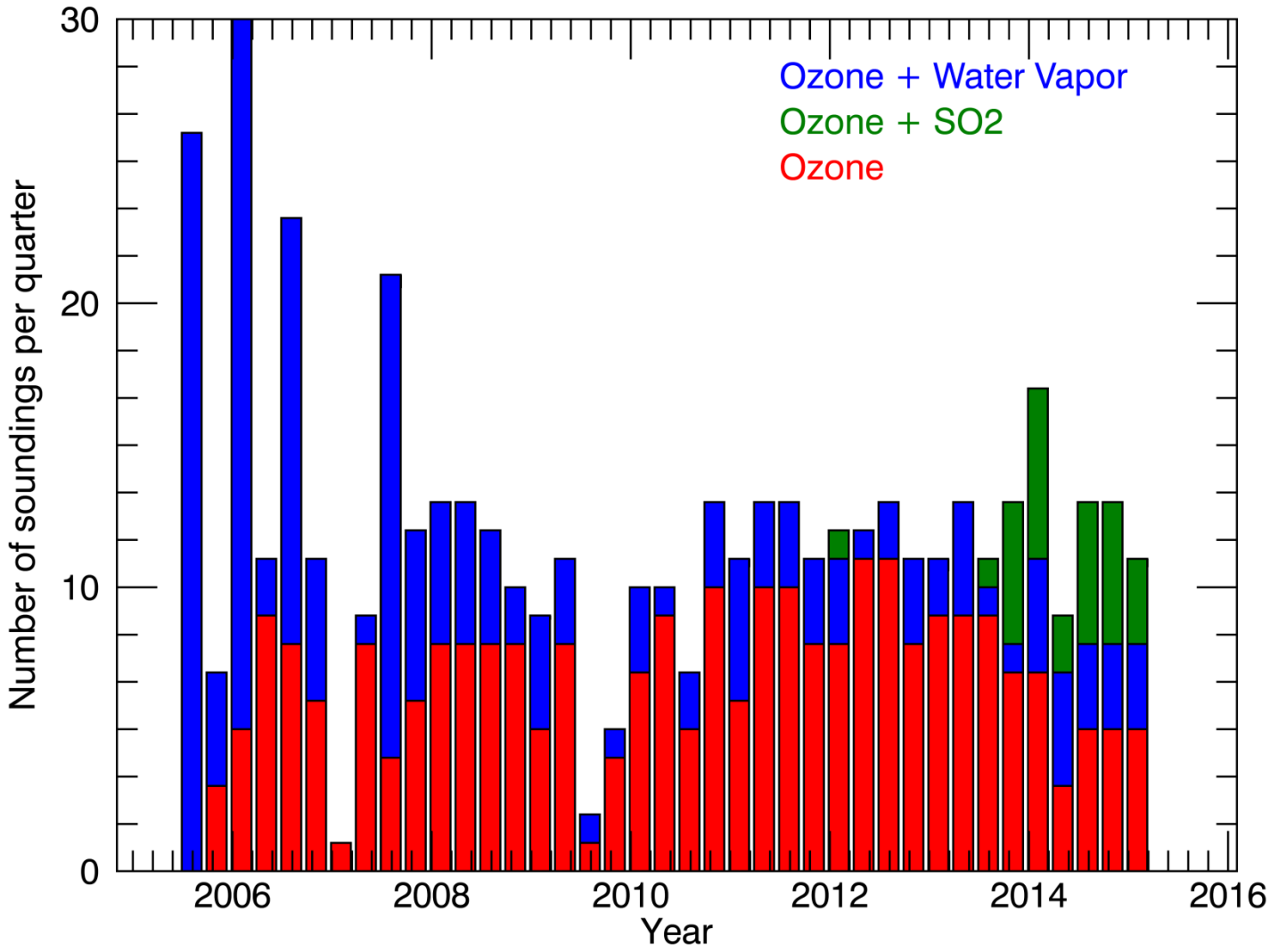
From Vömel et al., 2002

Stratospheric water vapor stations

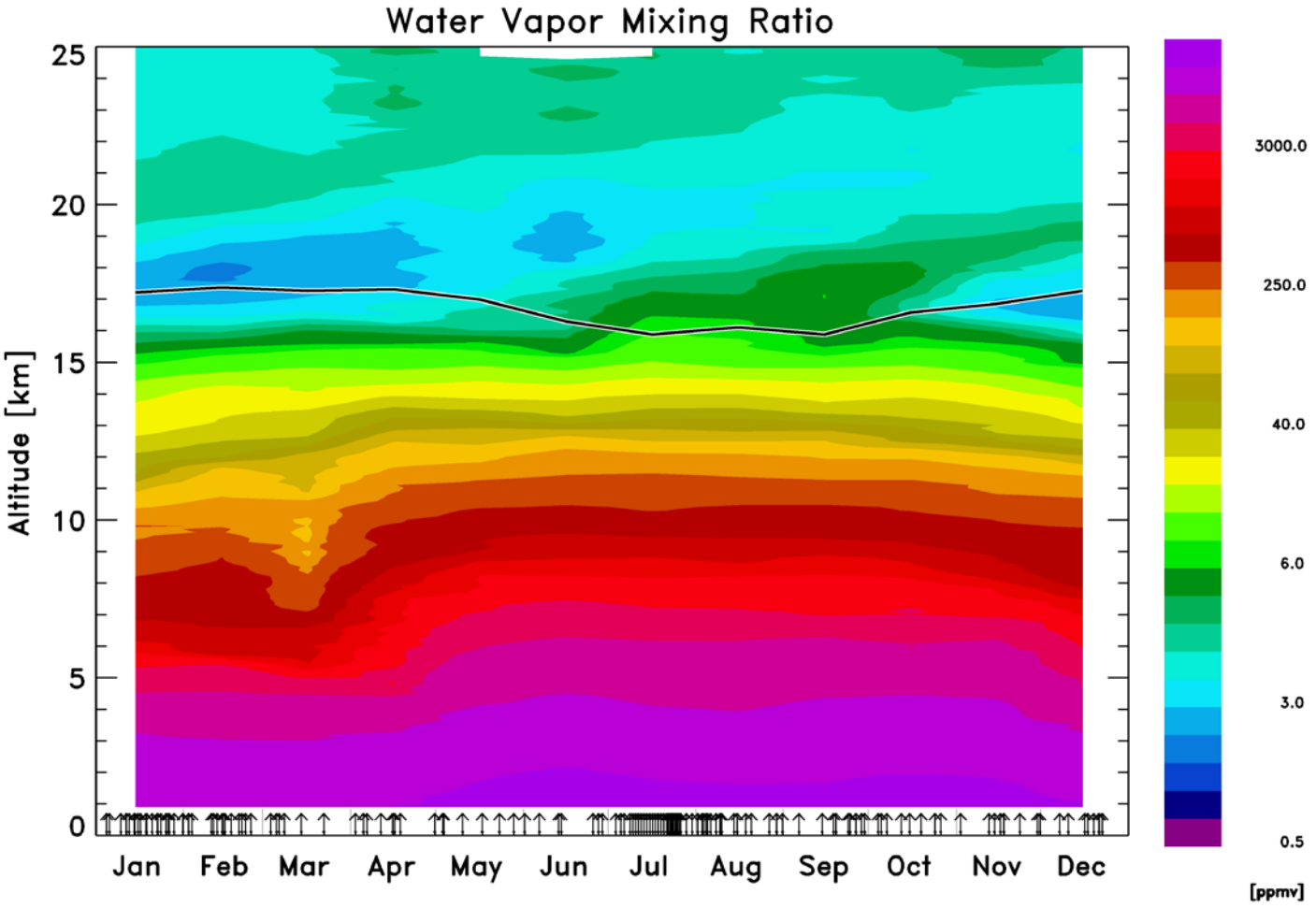


Water Vapor and Ozone Sounding (Costa Rica)

Launch statistics at Costa Rica

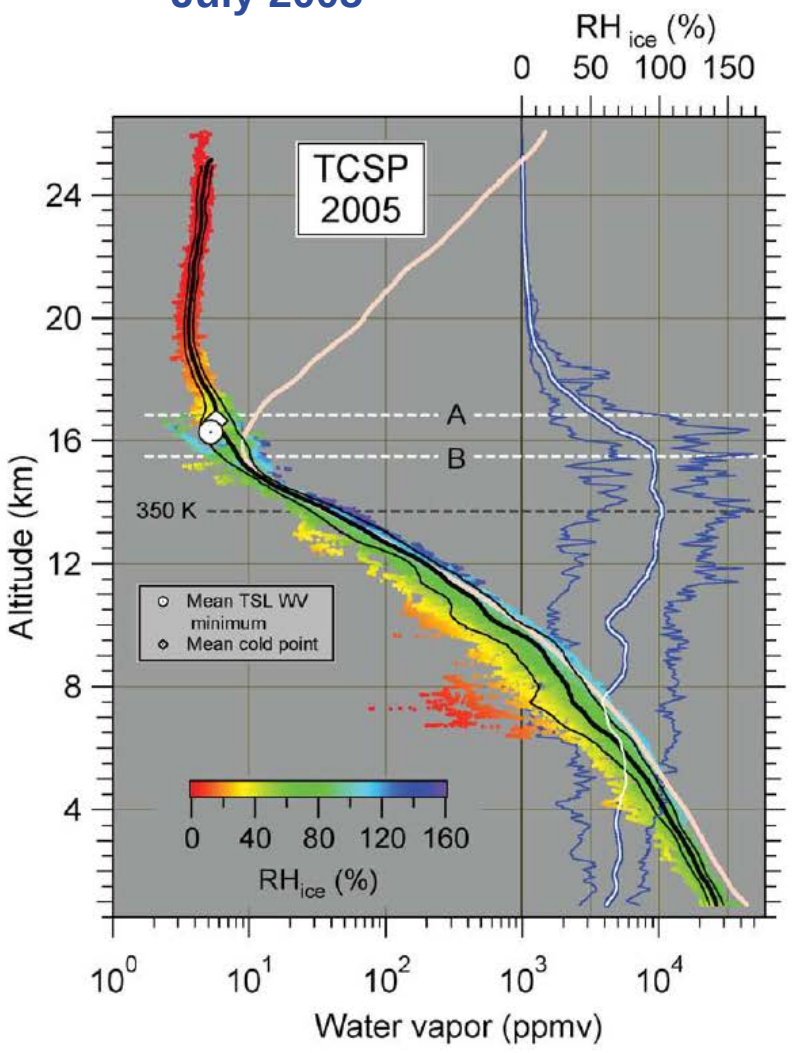


Water Vapor Climatology at Costa Rica

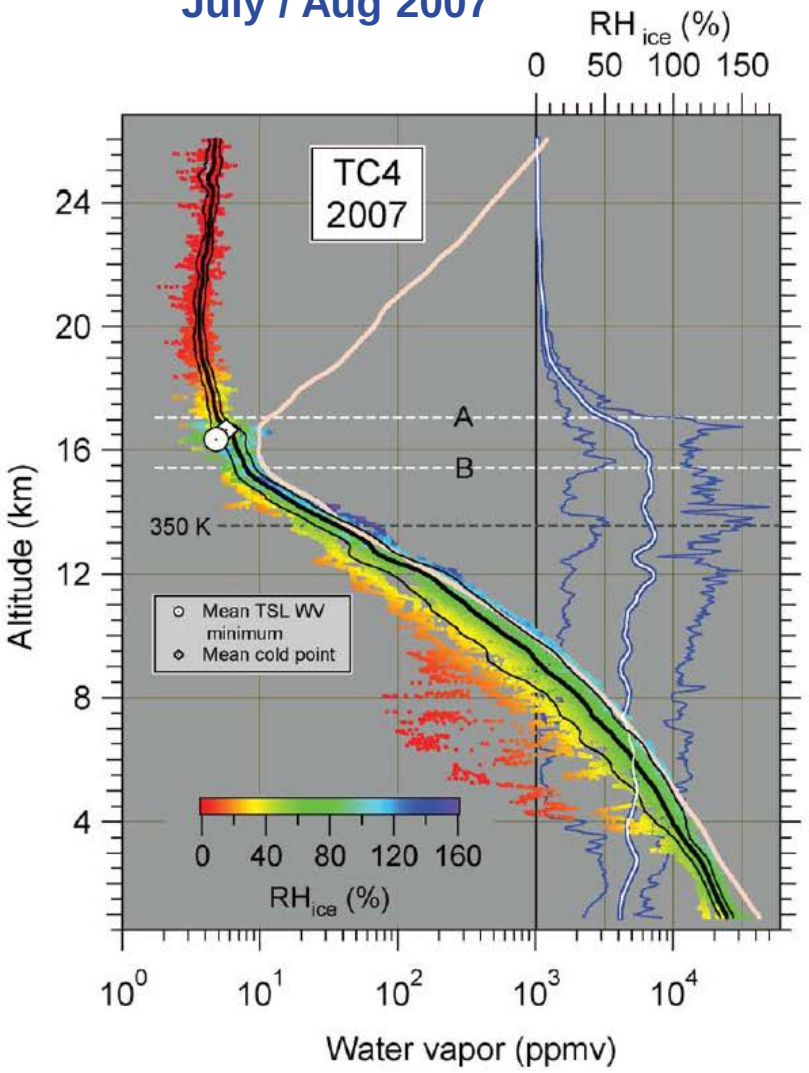


Water vapor during summer

July 2005

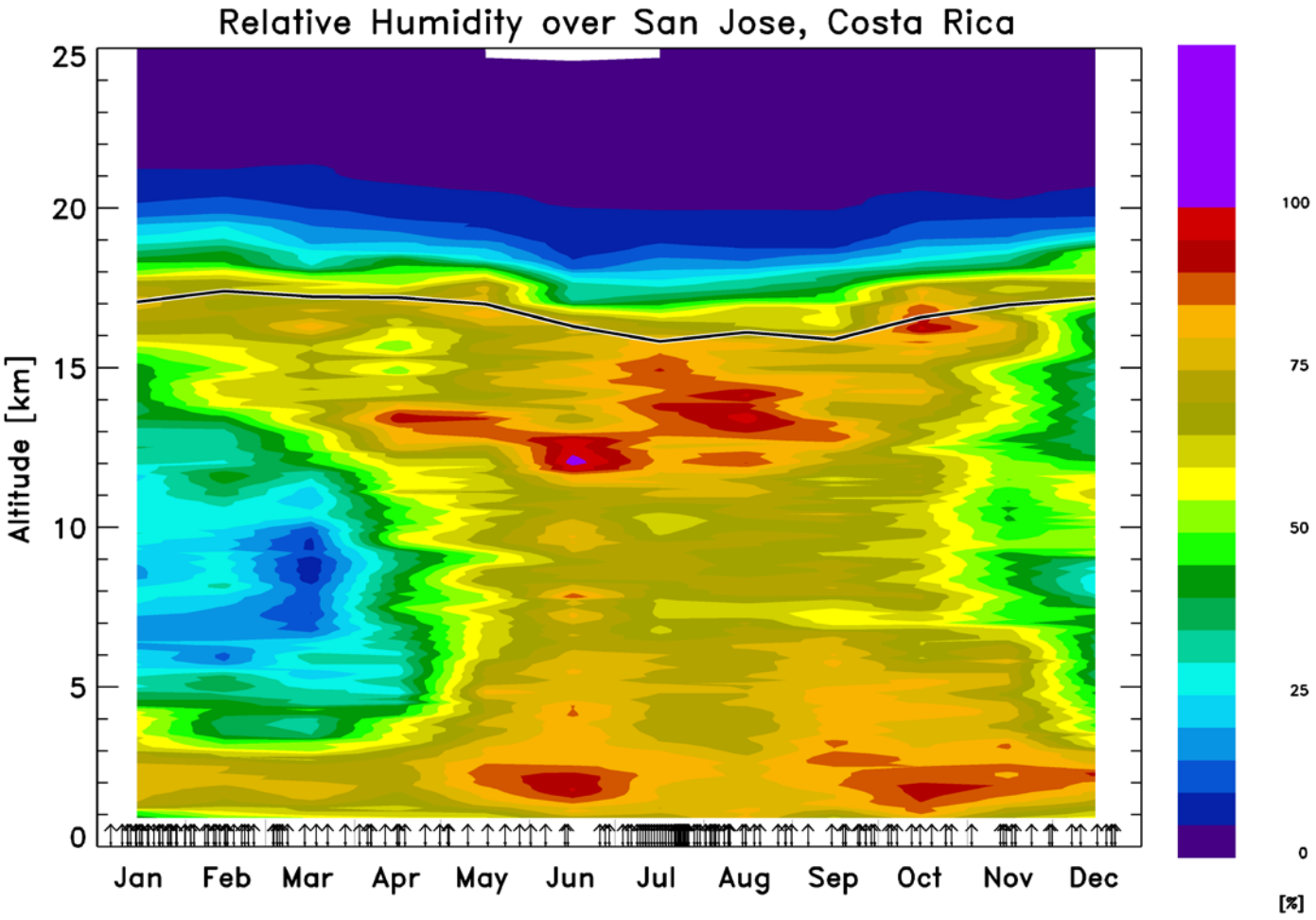


July / Aug 2007

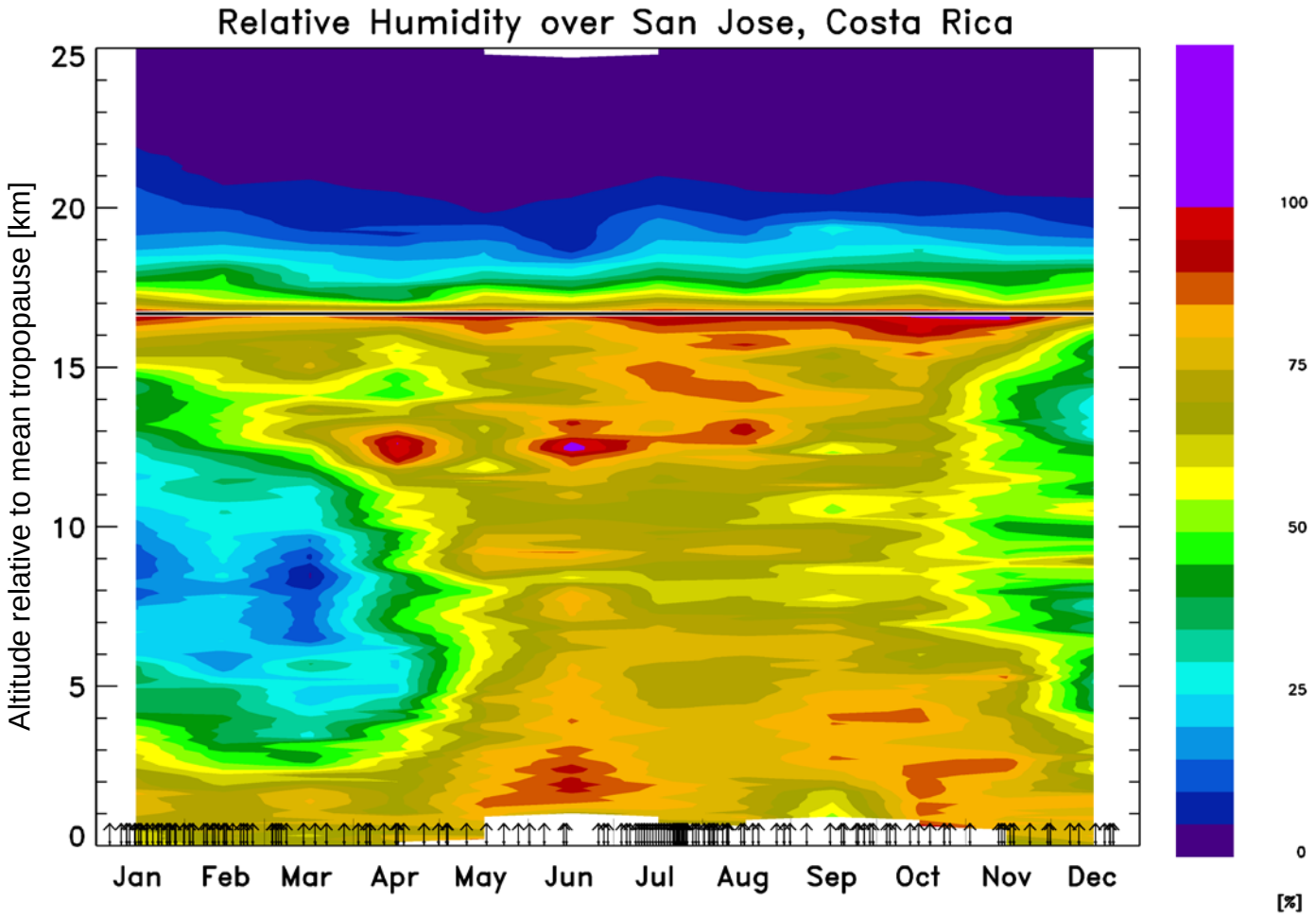


From Selkirk et al. JGR (2010)

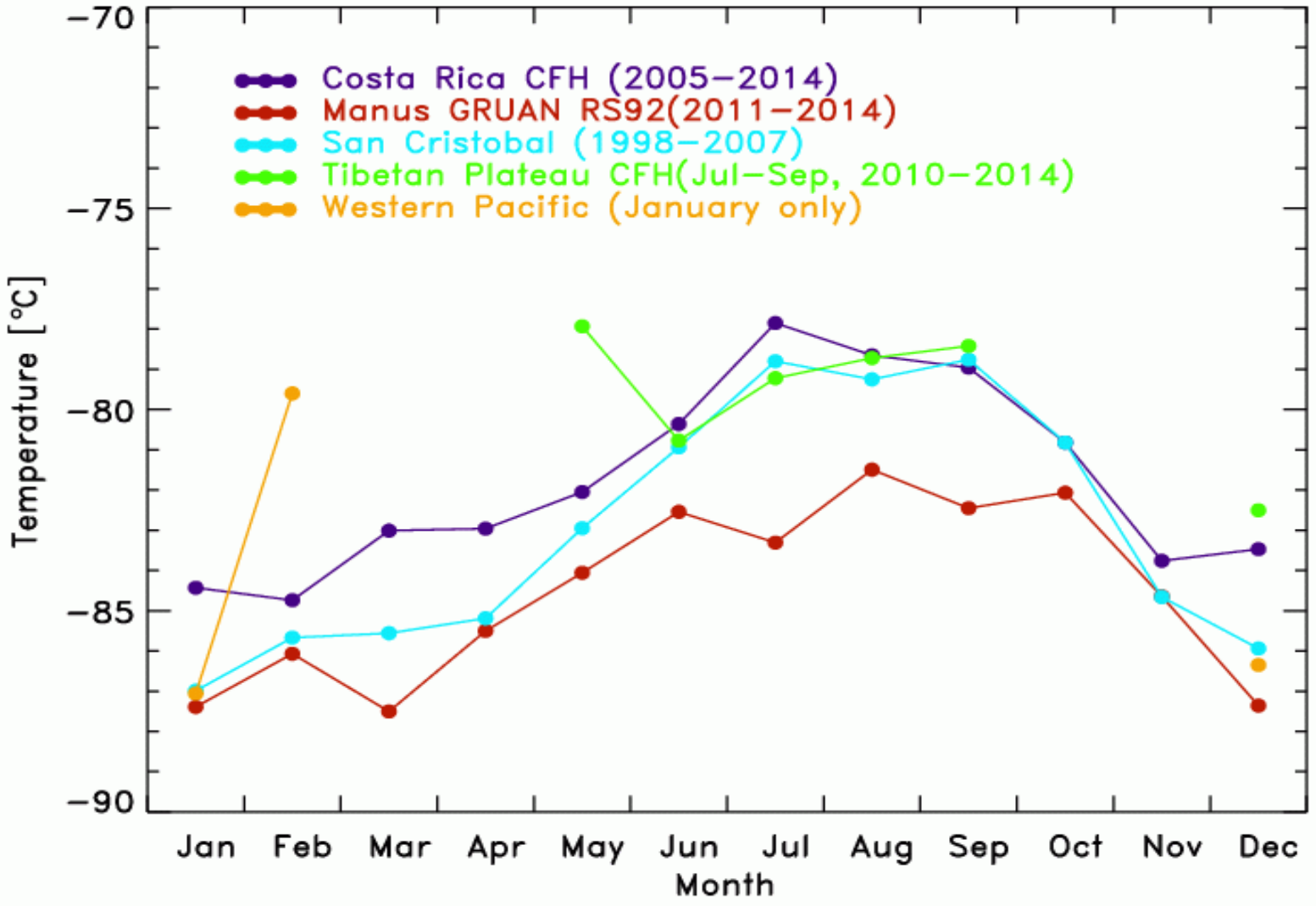
RH (ice) Climatology at Costa Rica



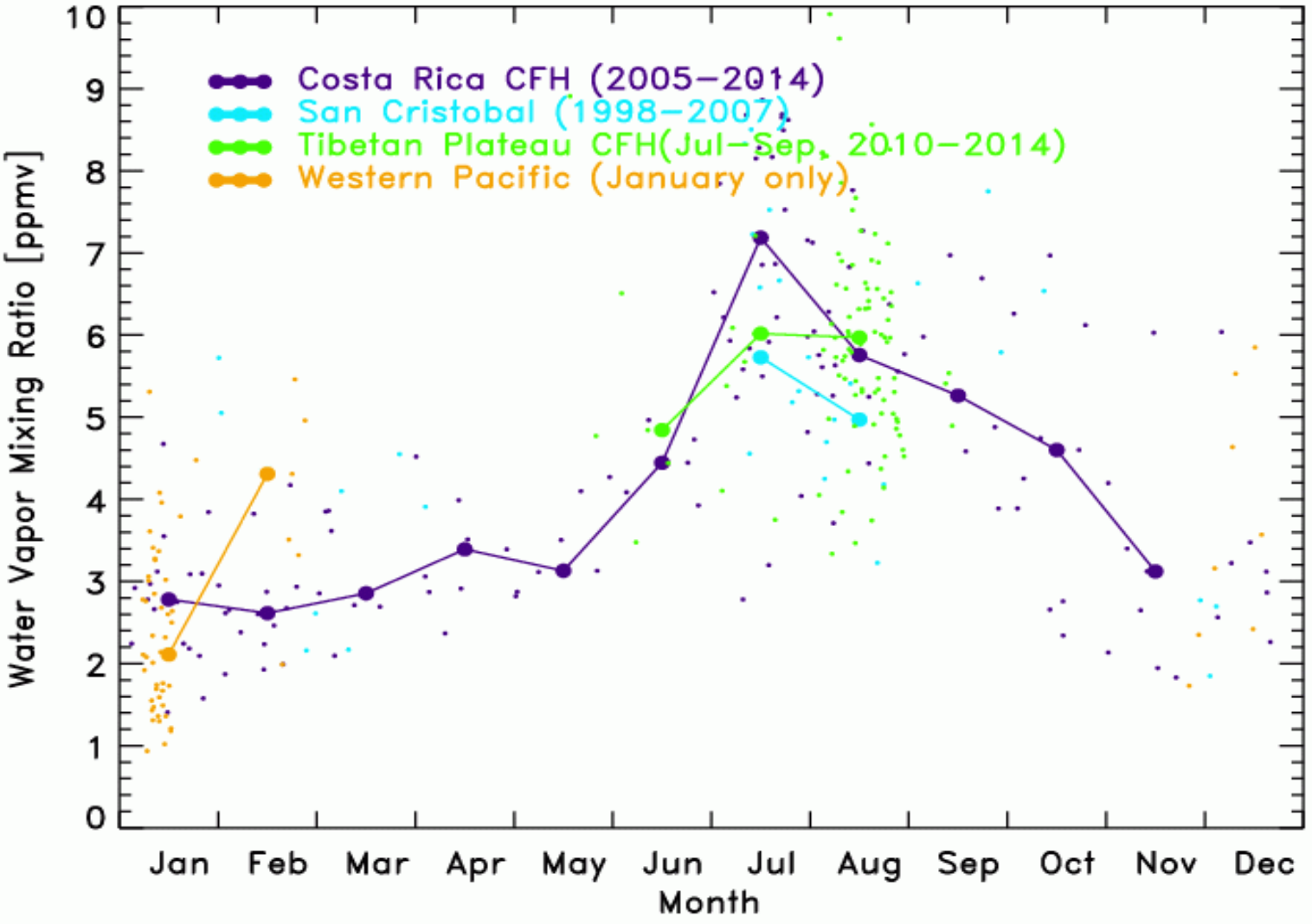
RH (ice) Climatology at Costa Rica Relative to Tropopause



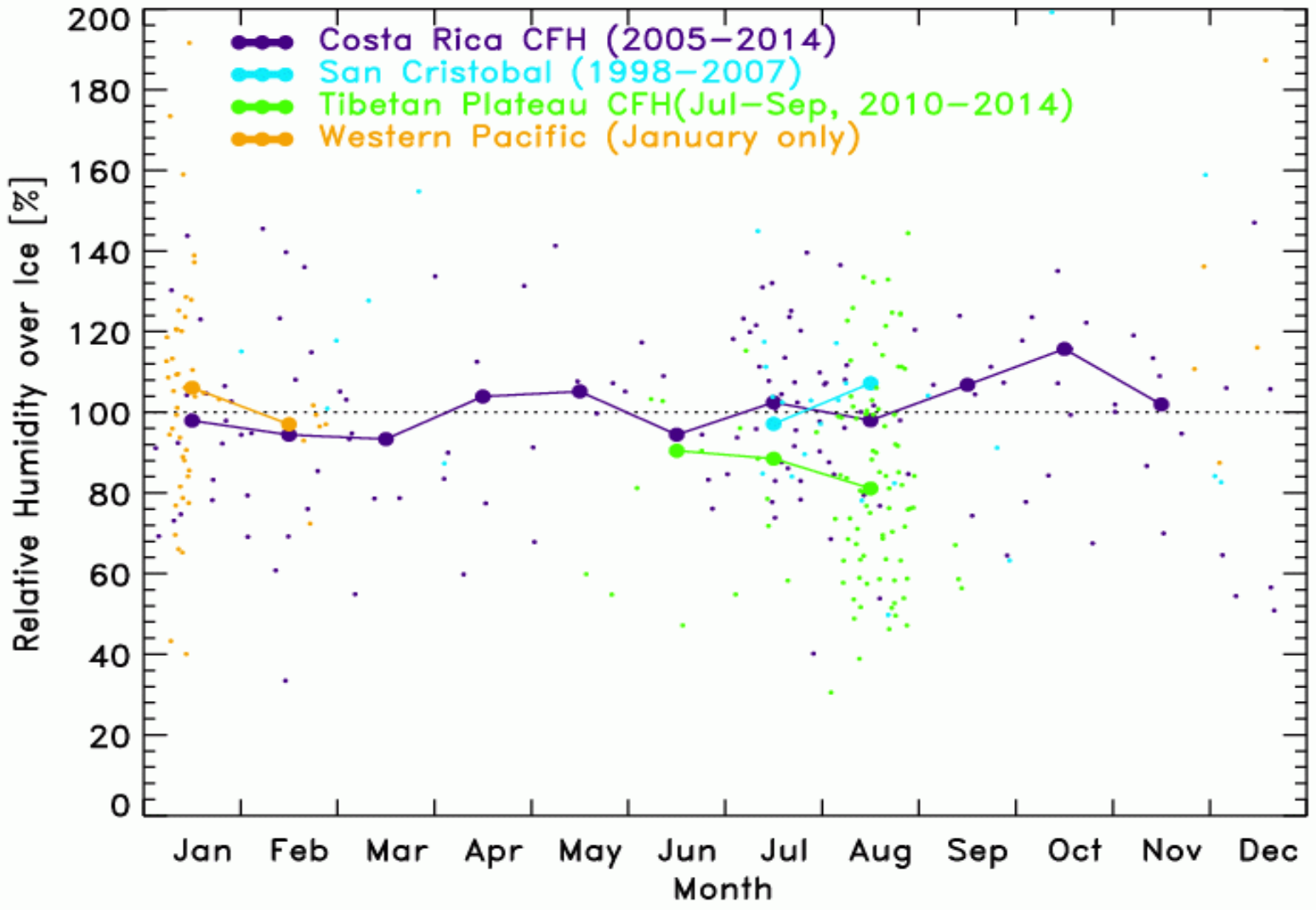
Seasonal Cycle: Temperature



Seasonal Cycle: Water Vapor



Seasonal Cycle: RH Ice



Summary

- 10 years of simultaneous water vapor and ozone profiles over Costa Rica
- Tropopause temperature
  - Monthly mean shows strong seasonal cycle
- Tropopause water vapor mixing ratio
  - Monthly mean shows strong seasonal cycle (tape recorder)
- Tropopause relative humidity over ice
  - Monthly mean nearly constant at 100%