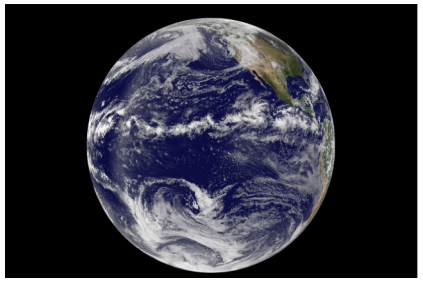

Radiation-Cloud-Convection-Circulation interaction associated with structural changes of the ITCZ : Testing the Deep Tropical Squeeze (DTS) hypothesis

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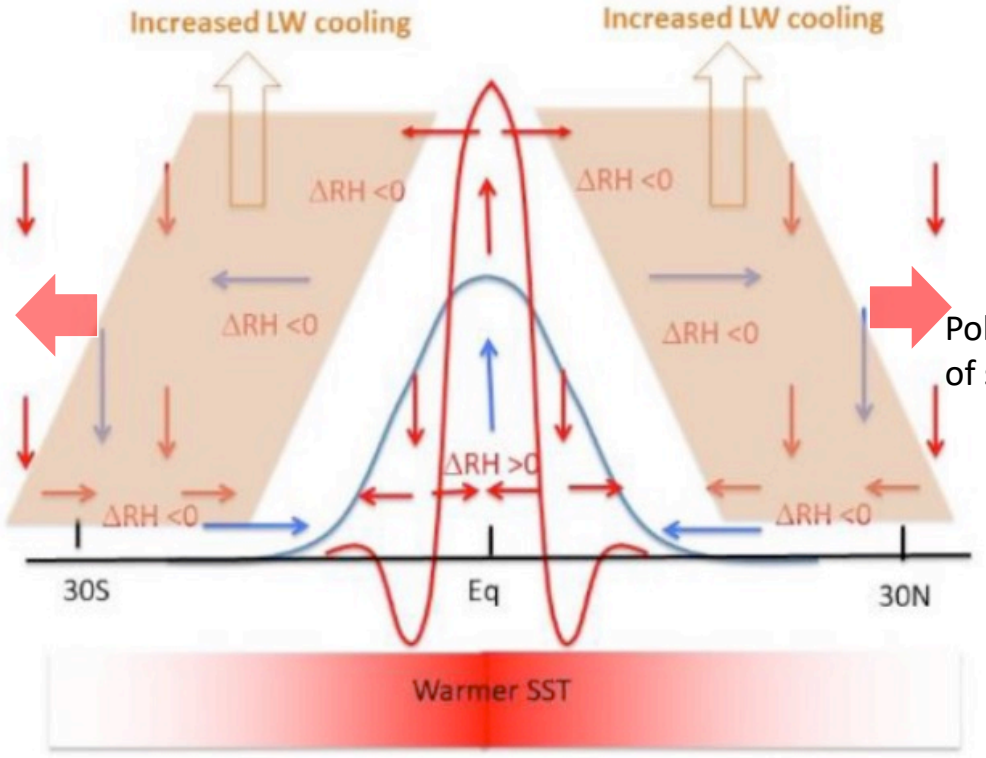
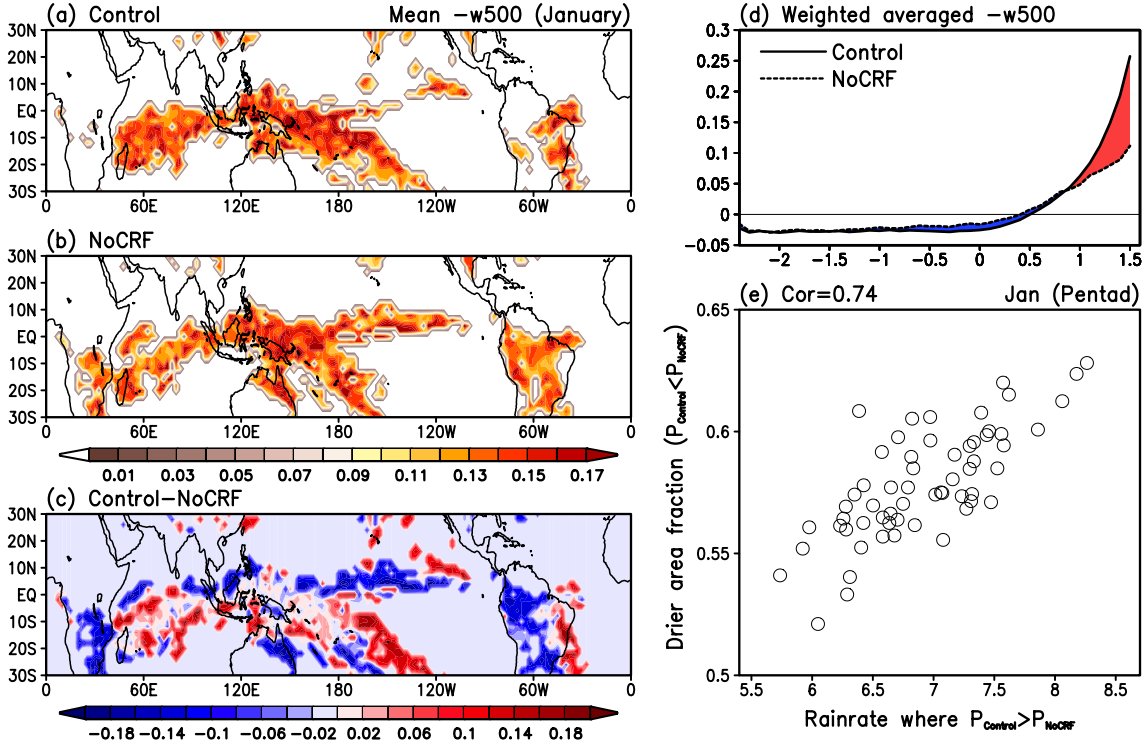


Poleward shift of storm tracks,



Radiation-Cloud-Convection-Circulation Interaction (RC3I) leads to:

-> warmer tropics, with increased precipitation/latent heat release in the ITCZ core

-> intensified and narrower ascending branch of HC + rise in maximum outflow level

-> increased drying and widening of descending branch of HC in subtropics

-> hotter and drier subtropics, expanding arid and semi-arid regions, more drought, wildfires…

-> poleward shift of extratropical storms

(Lau and Kim 2015, Lau et al. 2013, 2019, Lau and Tao 2020, Zhang et al.2020)