Some Preliminary Budget Estimates

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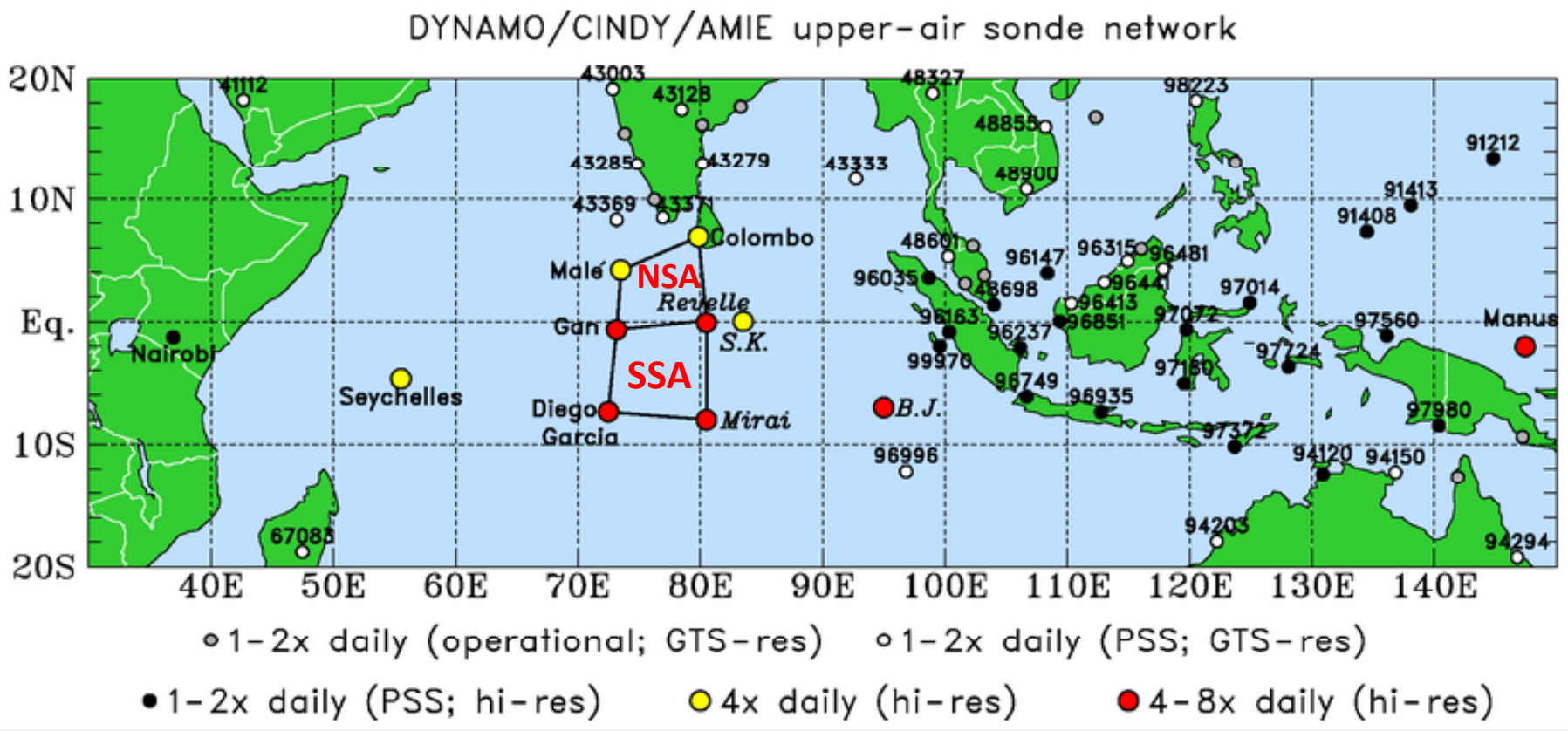
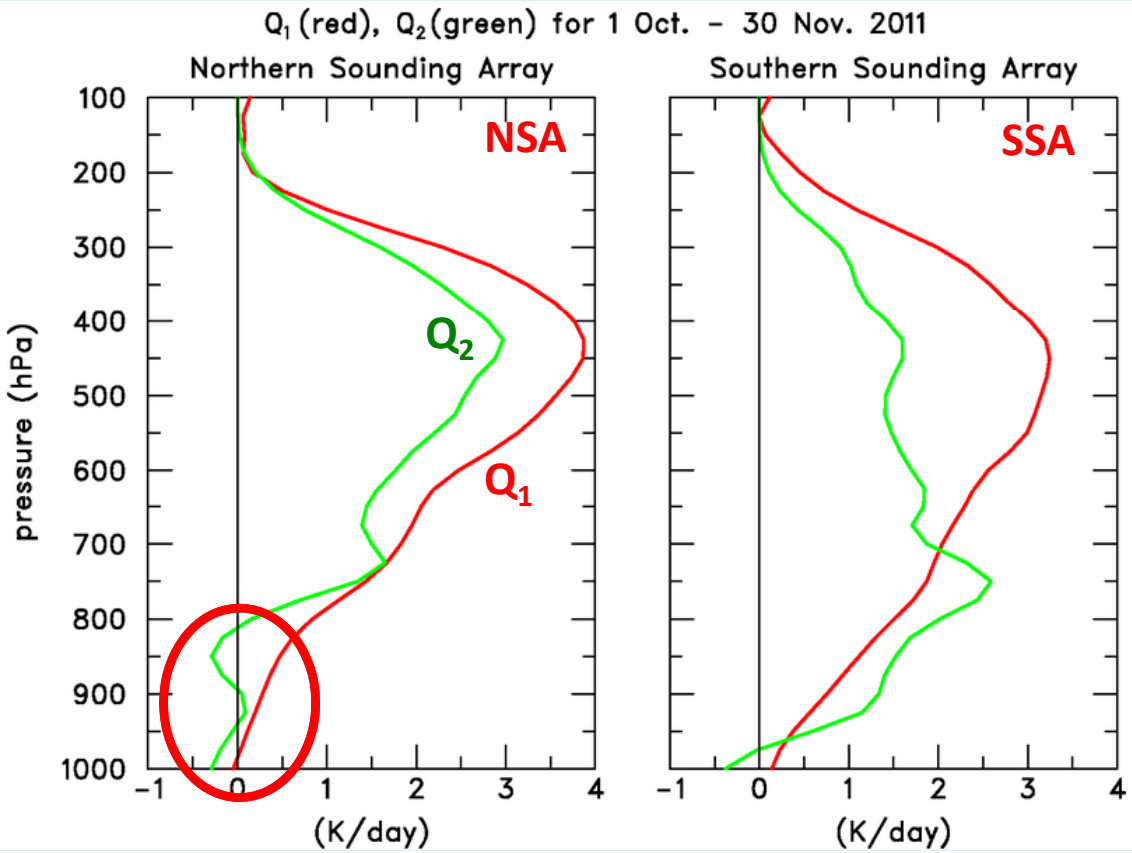


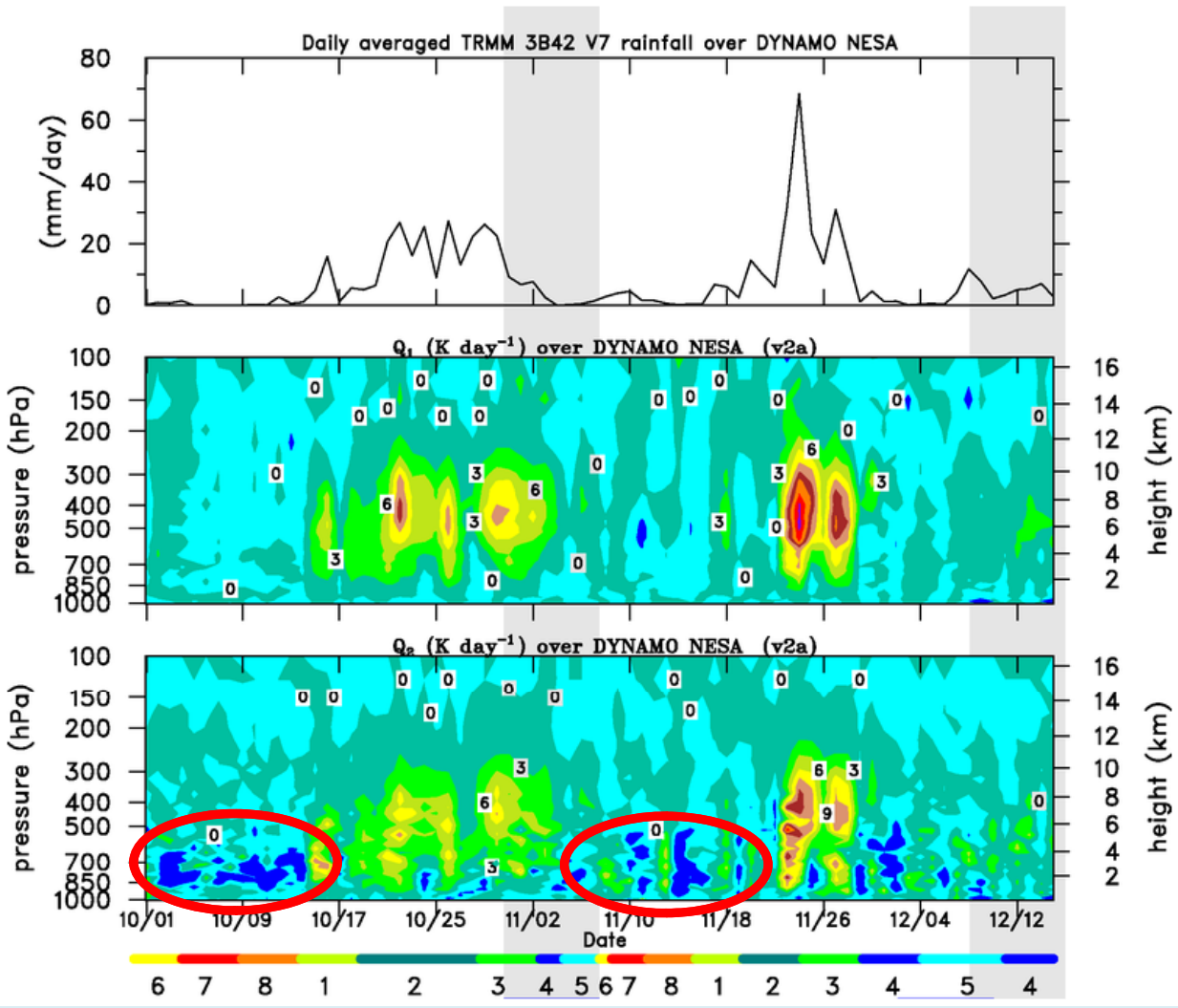
Comparison of Preliminary Q1 and Q2 profiles for 1 Oct. – 30 Nov.



- NSA has more top heavy heating profile than SSA
- NSA has weak low-level heating and little low-level drying
- SSA shows strong low-level heating and drying
- Larger separation of peaks in SSA implying stronger convective fluxes in this region, possibly more stratiform convection over NSA.

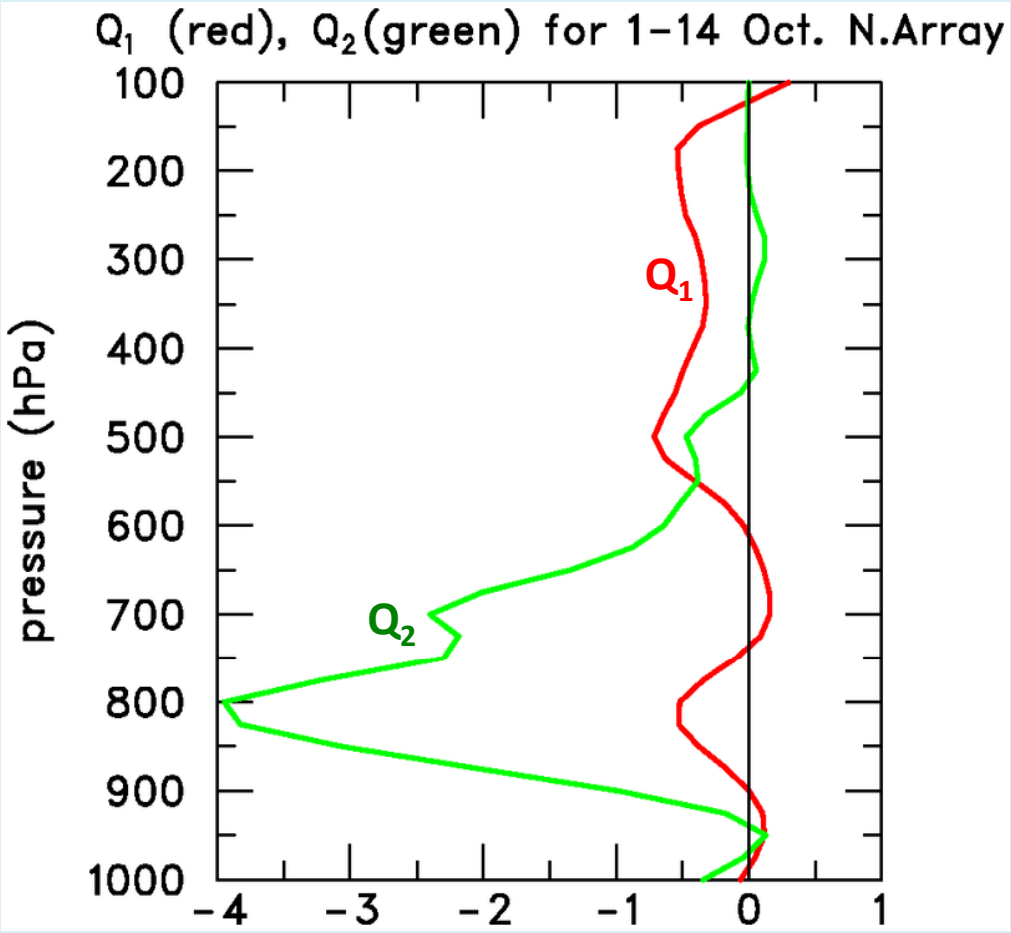
What's causing the small low-level drying (even mean moistening at some levels) over NSA and is it real?

Time series of rainfall (top), Q1 (middle) and Q2 (bottom) over NSA

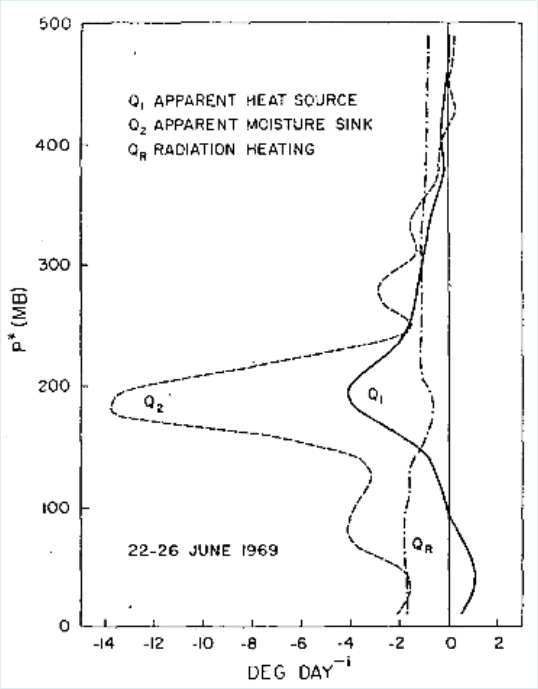


- Strong heating and drying episodes associated with MJO active phases are quite evident.
- Pre-active MJO periods were characterized by strong low-level moistening

Budget profiles for pre-active October period over NSA



- Strong low-level moistening and weak heating during this period imply the presence of shallow non-precipitating convection.
- This is similar to what Nitta and Esbensen (1974) observed in the trade cumulus regime during BOMEX.



- Also observed in TOGA COARE during light wind, suppressed periods and westerly wind bursts (Johnson and Lin 1997)

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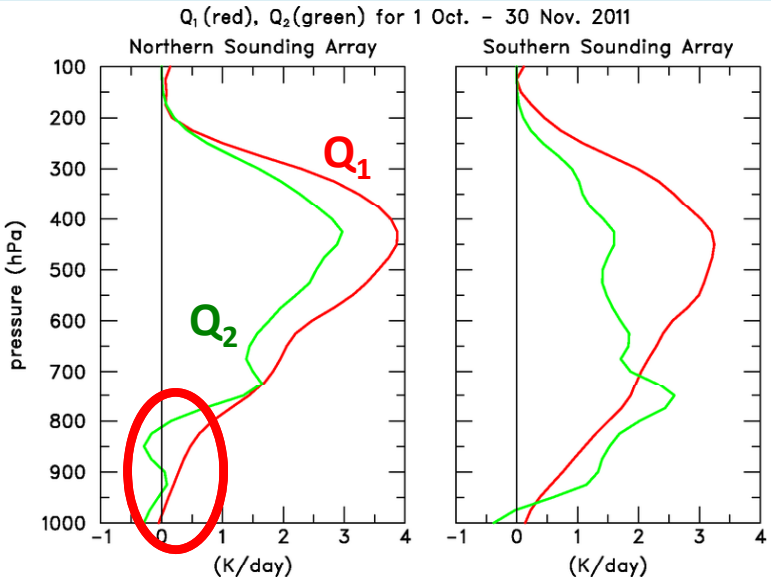
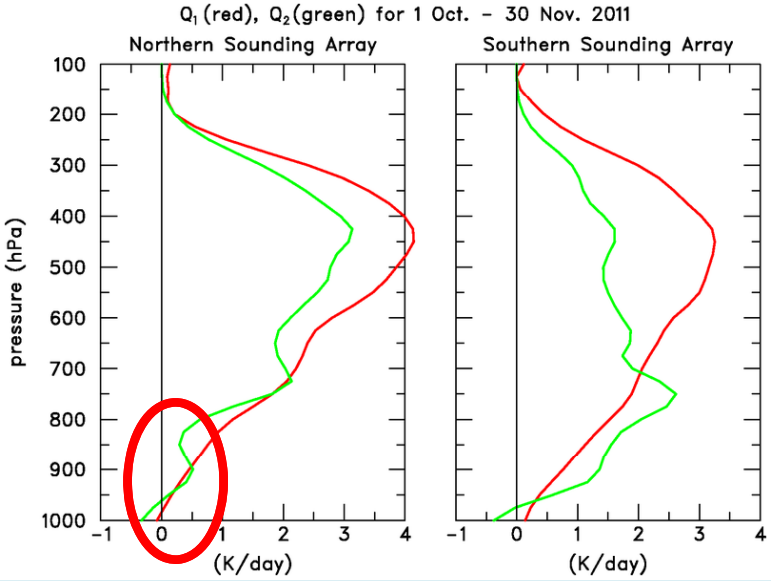


NSA **SSA**



With flow blocking effects at Colombo

With flow blocking effects at Colombo **minimized** NSA now shows slight mean drying at low-levels