Shallow cloud structure and organization under suppressed conditions in AMIE/DYNAMO

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AMIE/DYNAMO







Ealadga and Houze (2013)





Active periods: Increased rainfall/organization

Suppressed periods: Reduced rainfall, shallower convection, dry mid-levels

October



5 October











6 October























Lima and Wilson (2008) Amazon (TRMM-LBA)









Summary

- As near active period, increase rain, deeper echo, more cells
- Convection forming along boundary layer features (rolls, cloud lines) produce cold pools during afternoon
 - New initiation focused along gust front
 - More numerous and deeper convection when gust fronts intersect
- Same for November (December is odd...)

Next steps

- Characterize periods and properties of cloud lines (environment, frequency, diurnal cycle, nonprecipitating clouds)
- Manually document cold pools (maximum diameter, parent convection characteristics)
- Continue to search for times when gust front moves over Gan ARM site and relate to radar data











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