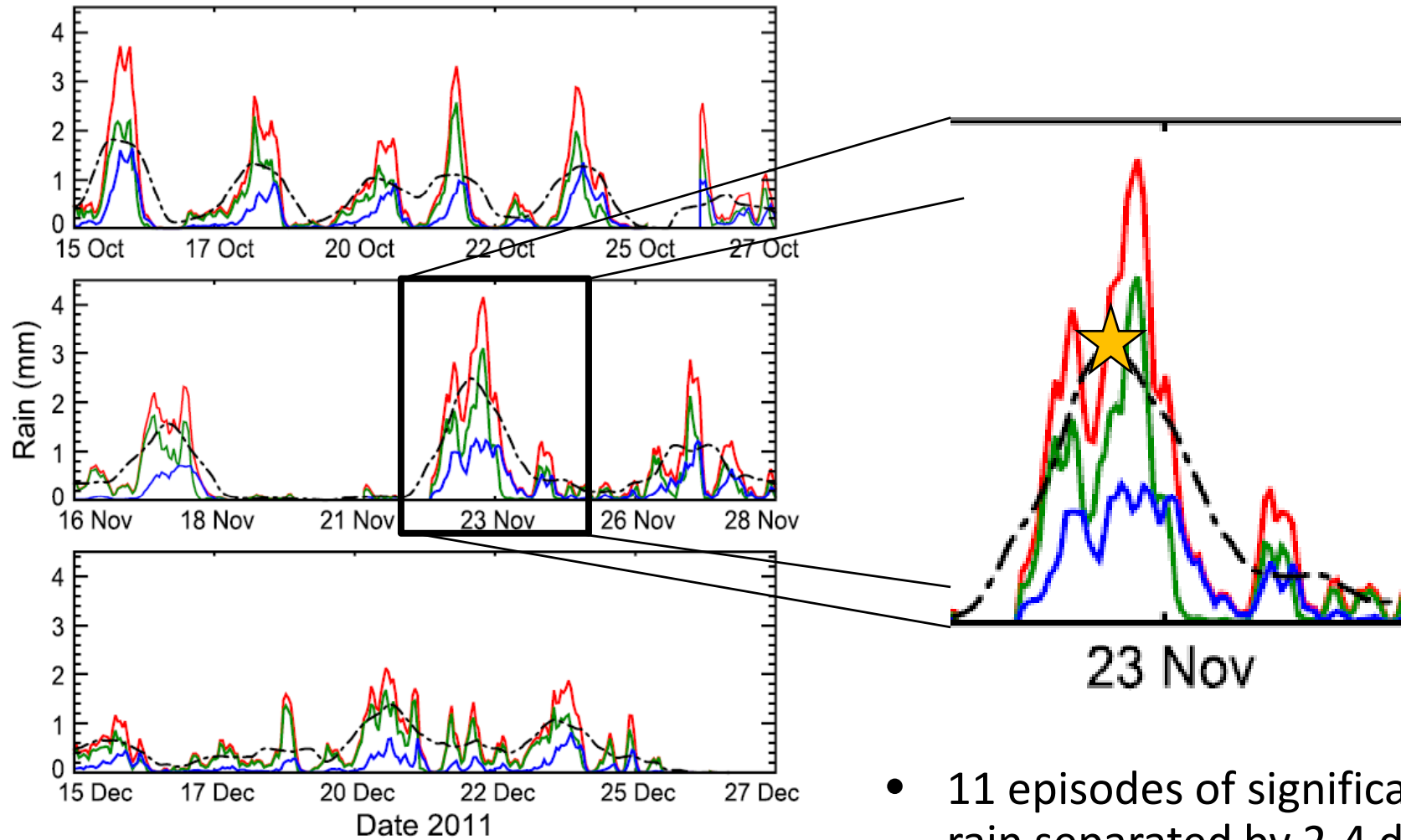


# Evolution of the Population of Precipitating Convective Systems

**Manuel D. Zuluaga and R. A. Houze Jr.**  
**University of Washington**

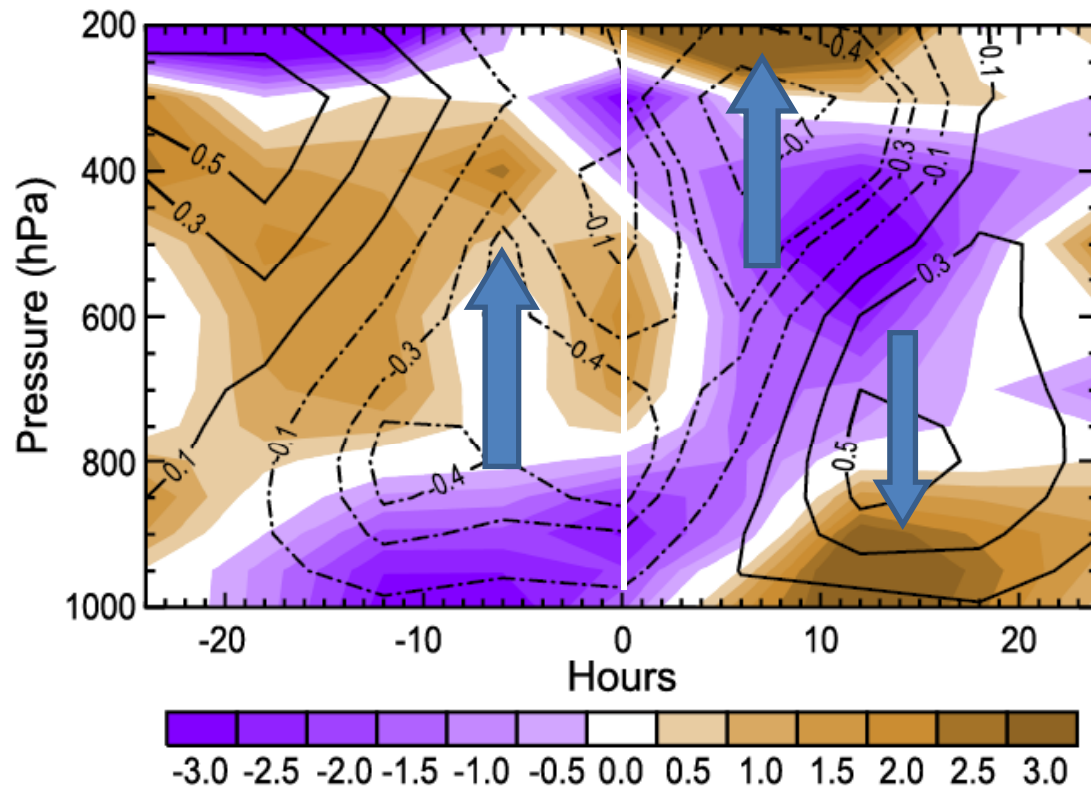
Convective Population and Evolution session  
MJO Field Data and Science Workshop, Hawaii  
March 5, 2013

# Rainfall accumulation from S-PolKa



- 11 episodes of significant rain separated by 2-4 days

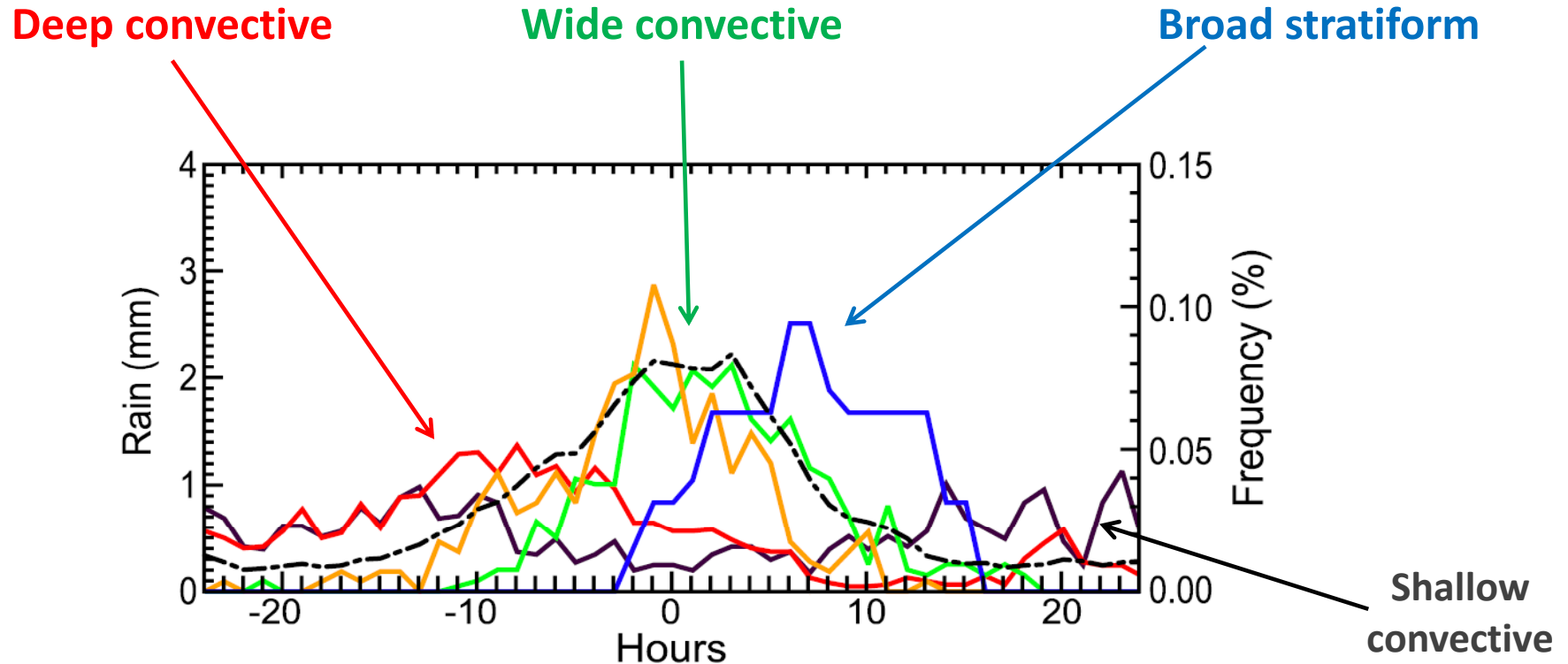
## Composites of Divergence and pressure velocity during 2-day rainfall episodes



Zuluaga and Houze 2013

- Unstable conditions and low-level convergence before rain maxima
- After peak in rain, profiles are representative of late anvil-producing stages
- Pattern sequence consistent with inertio-gravity wave (e.g., Kiladis 2009)

# Variation of the radar echo population

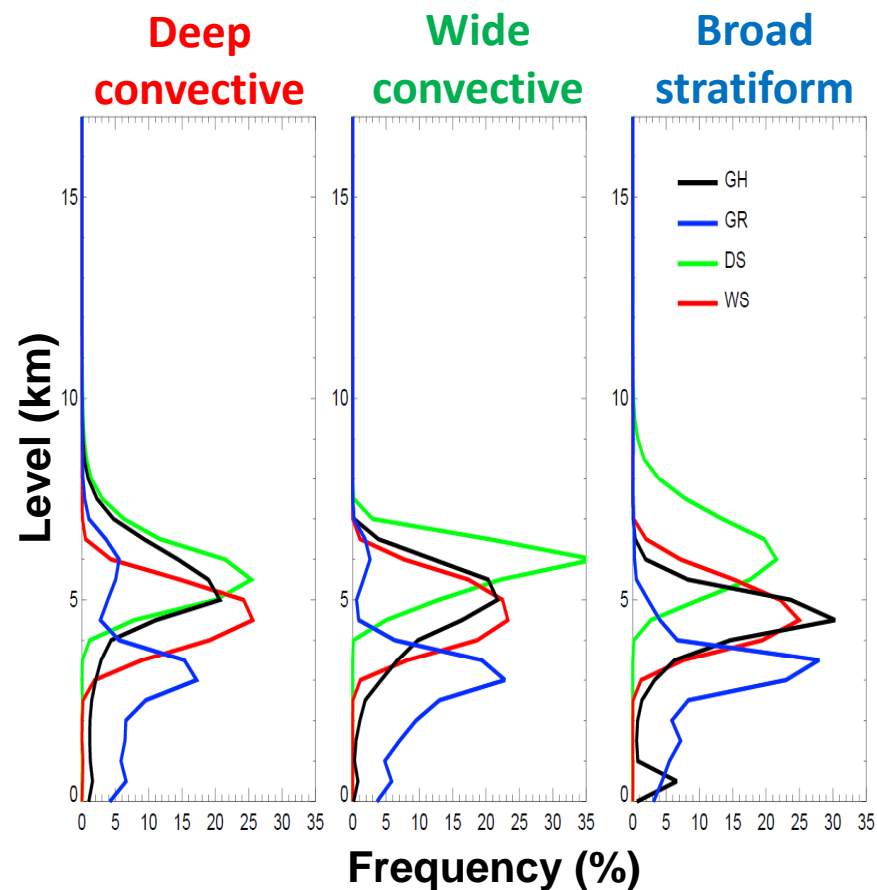


Zuluaga and Houze 2013

- The dominant membership of the convective population changes in sequential order

# Ongoing research

- Use hydrometeor characteristics (PID) as the population changes its membership
  - How is the vertical distribution?
  - How do they vary in time?
  - How do they correlate with model microphysics output?



## Acknowledgements

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