Simulator Prospects for LASSO*
Making model output look like retrievals

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*LES ARM Symbiotic Simulation and Observation Workflow

LASSO Webpage: https://www.arm.gov/capabilities/modeling

LASSO e-mail list sign up: http://eepurl.com/bCS8s5
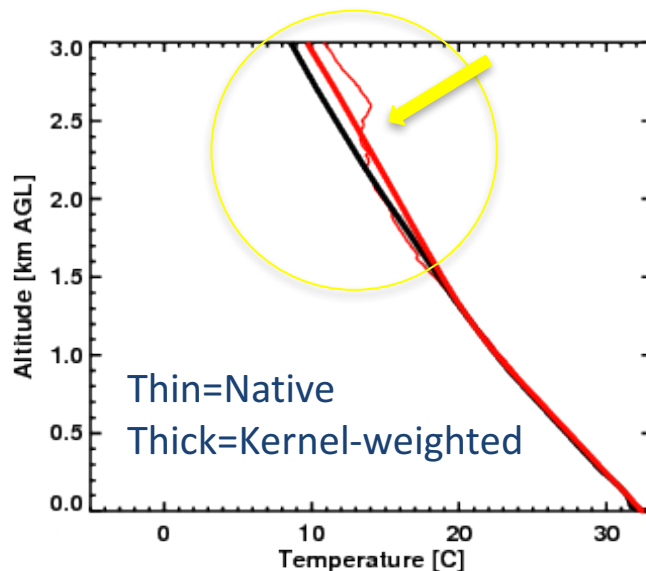
- **Cloud properties**
  - ▶ LWP
    - ● Generate a 2-D map of LWP & apply a 2 gm^{-2} threshold (AERIoe)
  - ▶ Cloud fraction
    - ● A q_l threshold can make a CF overestimation by 0.2
    - ● Base it on the LWP 2-D map – NOT on q_l threshold
- **AERIoe T & WV profiles (from Dave Turner)**
  - ▶ Apply kernel weighting to model profile to coarsen levels to AERIoe

Thin=Native
Thick=Kernel-weighted

Questions going forward

- ARSCL simulator (from Mariko & Pavlos)

  - ▶ How does one apply the simulator to properly account for the ARSCL representing only one 2-D subsample of the LES domain?

  - ▶ Can the simulator help account for uncertainties in the LES microphysics?

    - E.g., Assumed size distribution of ice particles etc.

- Visible methods

  - ▶ TSI cloud/sky fraction

  - ▶ Stereo photogrammetry cloud volumes (Romps/Öktem)

  - ▶ How to compare these to LES output?