

Lidar and profiling use in LASSO*

*LES ARM Symbiotic Simulation and Observation Workflow

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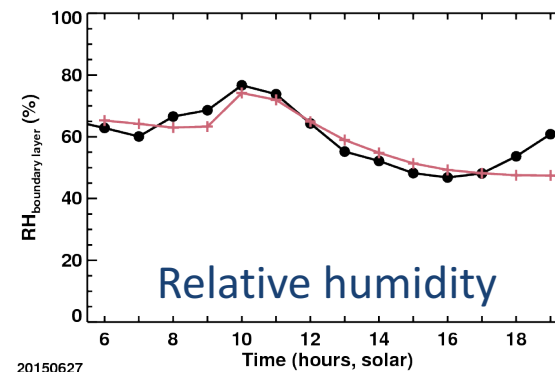
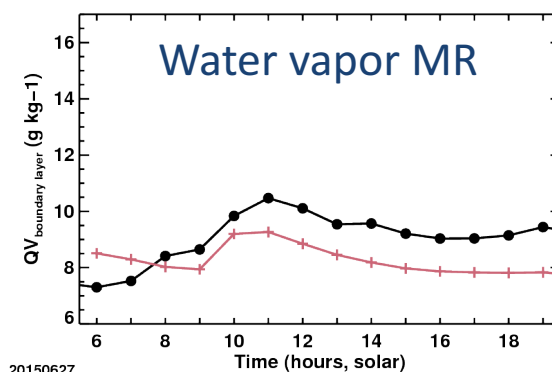
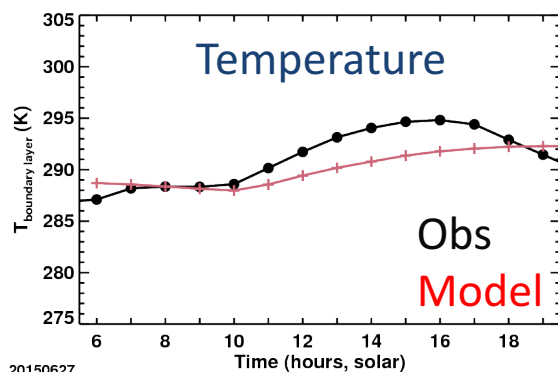
LASSO Webpage: <https://www.arm.gov/capabilities/modeling>

LASSO e-mail list sign up: <http://eepurl.com/bCS8s5>

Lidar and profiler use progression: Alpha 1

■ Alpha 1 data release in June 2016

- Initialization/Forcing: NA (uses sondes and surface met)
- Model evaluation @CF: Raman Lidar T, wv, RH at mid-BL (900-1100 m)

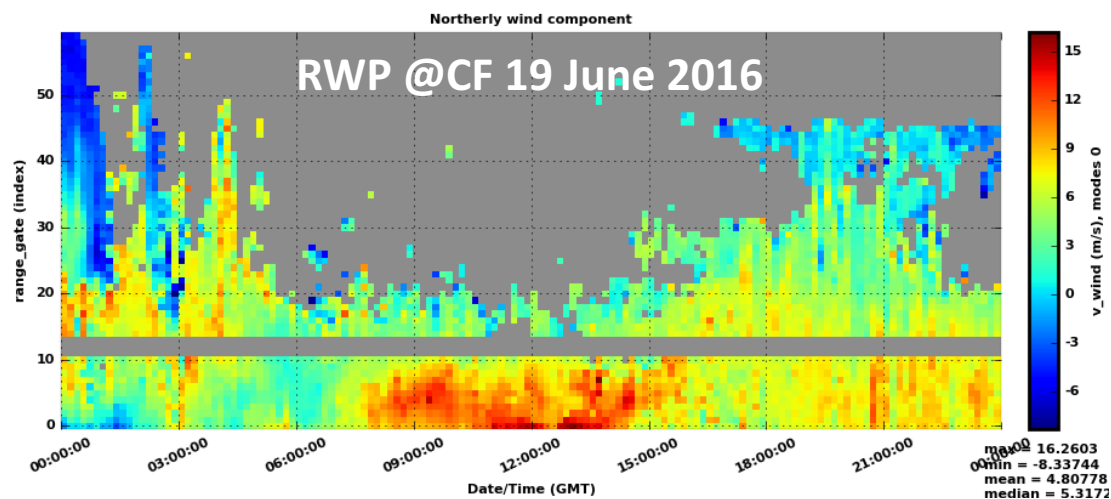
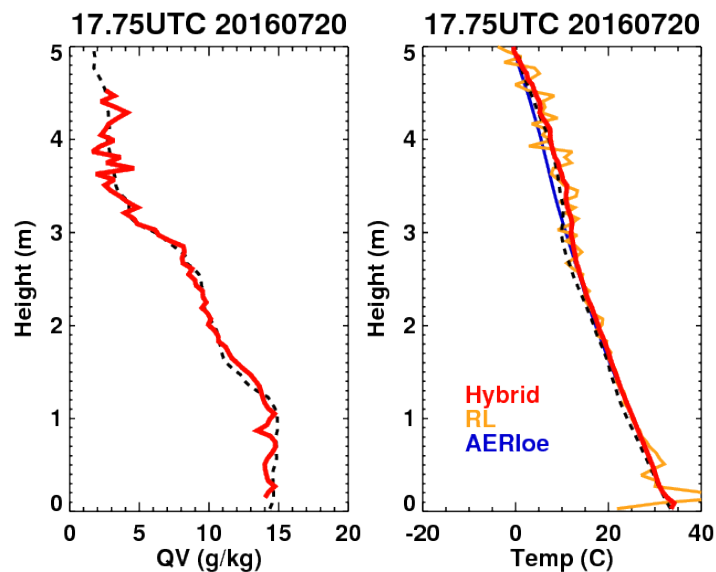


LASSO: 20150627, Simulation #21
SAM & MSDA

Lidar and profiler use progression: Alpha 2

■ Initialization/Forcing:

- ▶ Hourly BL Thermo profiles (T, P, wv) from Raman lidar/AERloe @CF, AERloe temperature at BFs (contemplating wv use)
- ▶ Hourly winds from the Radar Wind Profiler
 - More all-weather than DL, and save DL for evaluation



Future developments: CM4 CMDV Project

■ Model evaluation

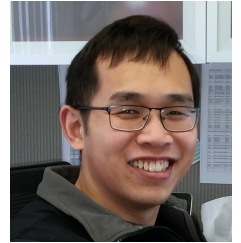
▶ Sub-cloud turbulence

- Object-oriented data processing
- Vertical velocity variance and skewness from Doppler lidar

▶ Mass Flux

- Estimates from Doppler Lidar and KAZR-derived updraft velocity

▶ (And more (!), but not relevant to this breakout...)



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