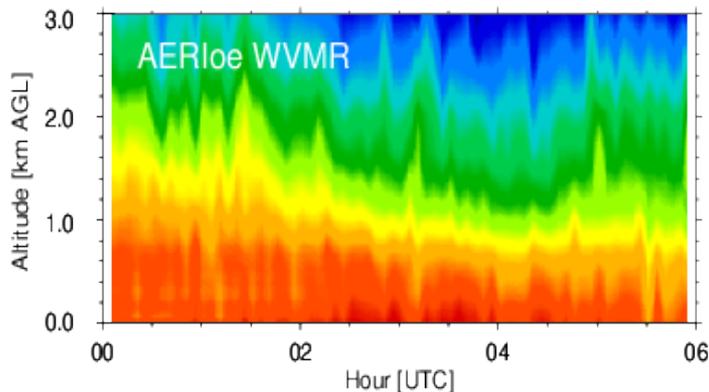


Use case: Run AERIOE operationally at 20 second resolution for 5 sites

Boundary layer
thermodynamic profiles
and cloud properties using
optimal estimation
retrievals take about 2 min
per profile.



AERIOE code and figure courtesy
of Dave Turner

Results of timing tests:

- Timing test: 48 half-hour jobs simultaneously
 - 1 model day: 20150801
 - Each job runs 3 lbrtm executables simultaneously
 - 144 asynchronous procs per model day
- Using DMF compute nodes (jasper and talc)
 - 32 CPUs each, 64 total (2.25 procs per CPU)
- Median wallclock per model half-hour job:
 - 25300 seconds (7 hours)
- To run 1 model year in 24 hours wallclock:
 - ~213 jasper-like nodes ($24/7 * 365 * 2$)