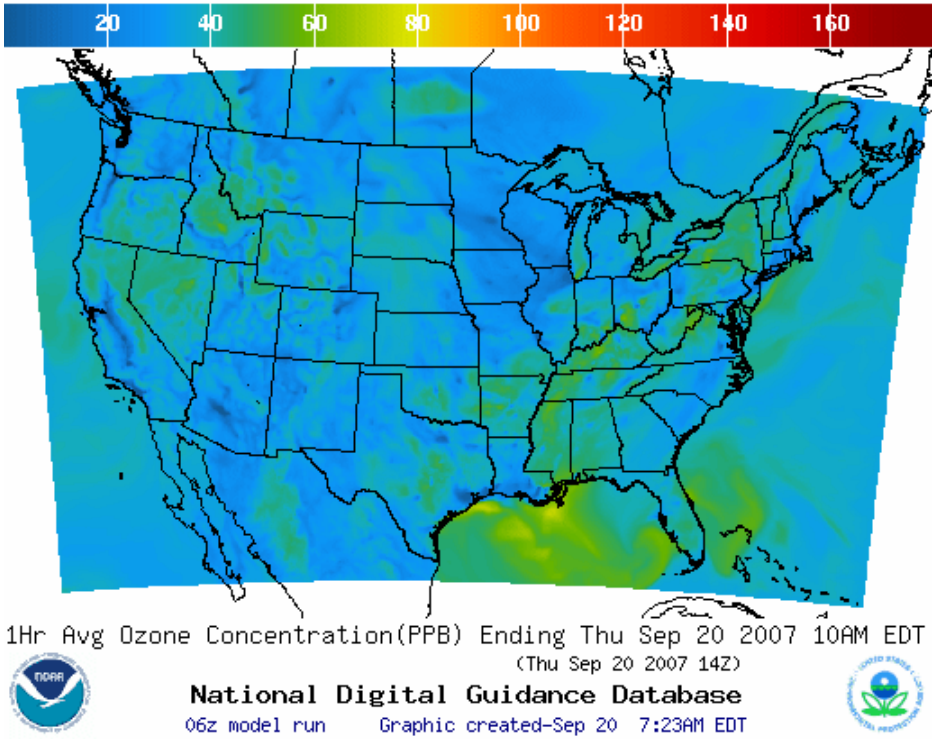
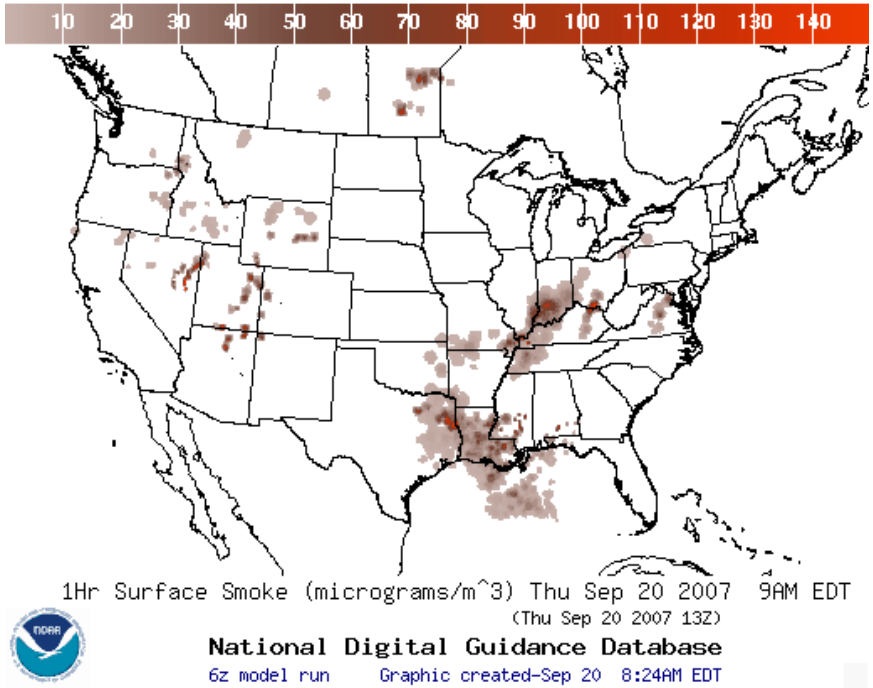
AQ forecast guidance for CONUS

www.weather.gov/aq





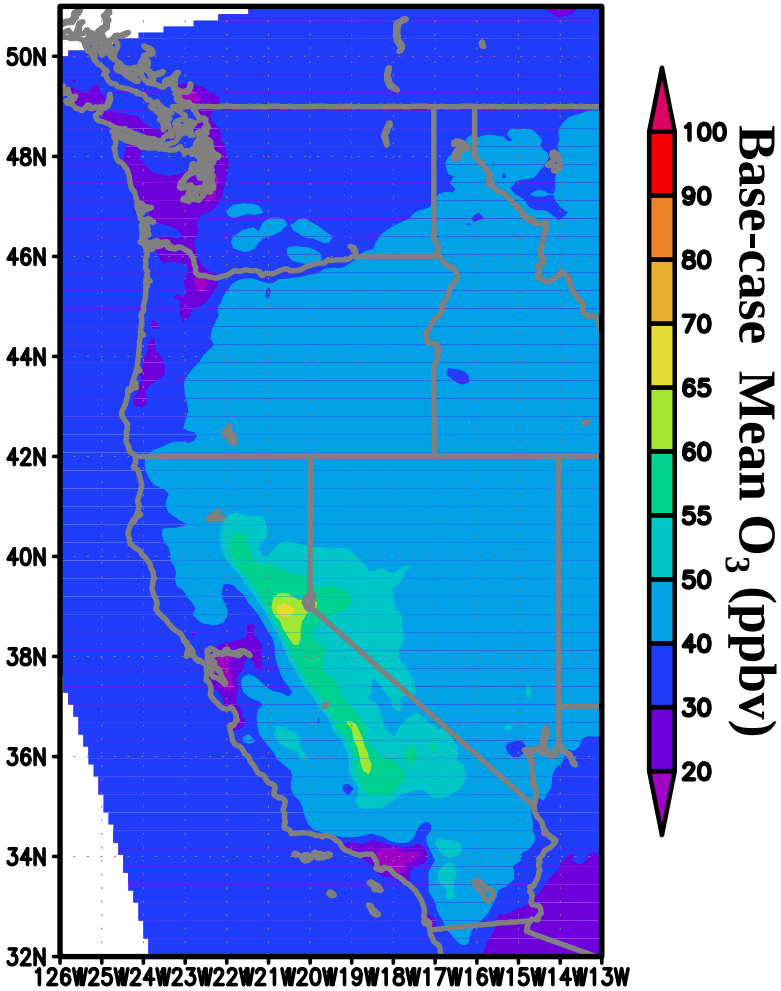
Predictions available real-time:
CONUS Ozone NAM(WRF-NMM)-CMAQ
Operational: 2X daily, 12km/1hr res,
Experimental: 2X daily, adv capabilities

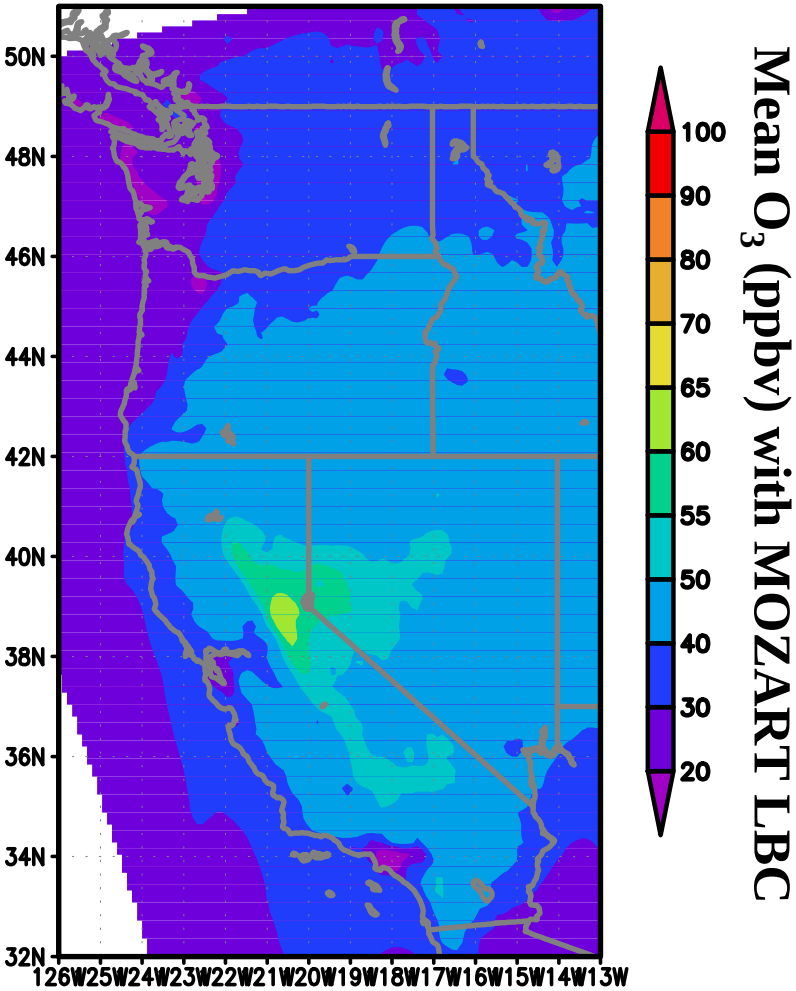
CONUS Smoke NAM-HYSPLIT
Operational predictions: 1X daily

Proposed Interests of NOAA NCEP & ARL for CalNeX 2010

- Collaborating with participated institutions, we will try to improve our current 12km CONUS meteorological and air quality predictions over U.S. west coast (www.weather.gov/aq).
- Test the high-resolution 4km meteorological run.
- Test the impact of lateral boundary conditions
- Test the usage of data assimilation in AQ prediction.
- Emissions (include smoke emission) and observation verification (include satellite products collaborating with NOAA NESDIS)

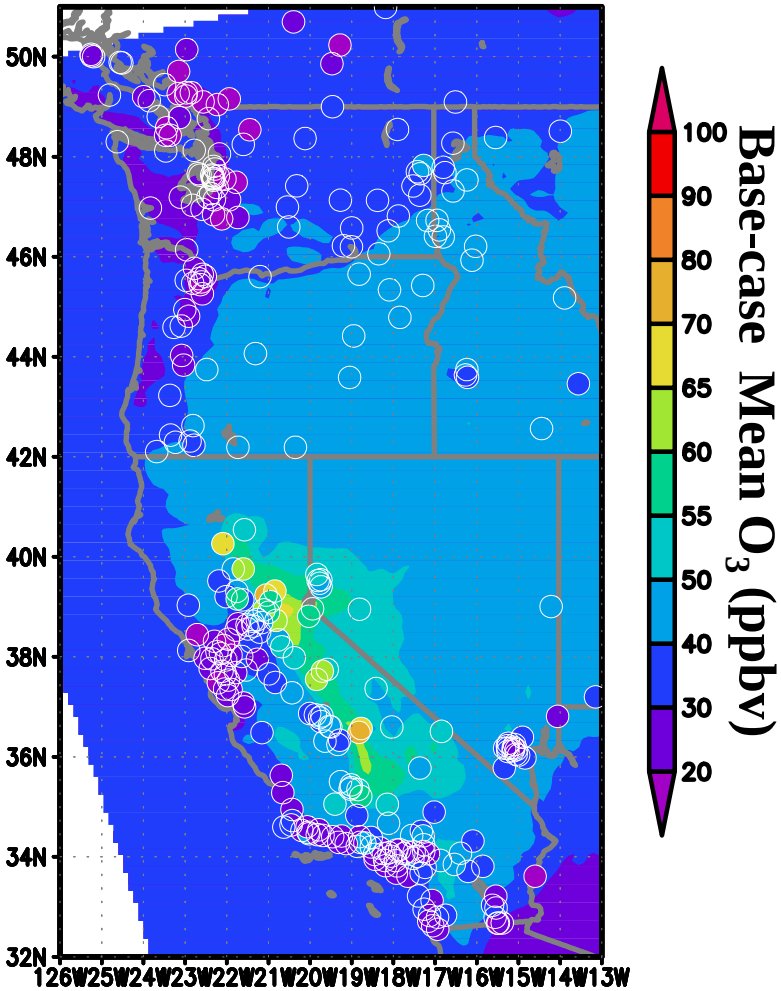
An example of regional-global model coupling

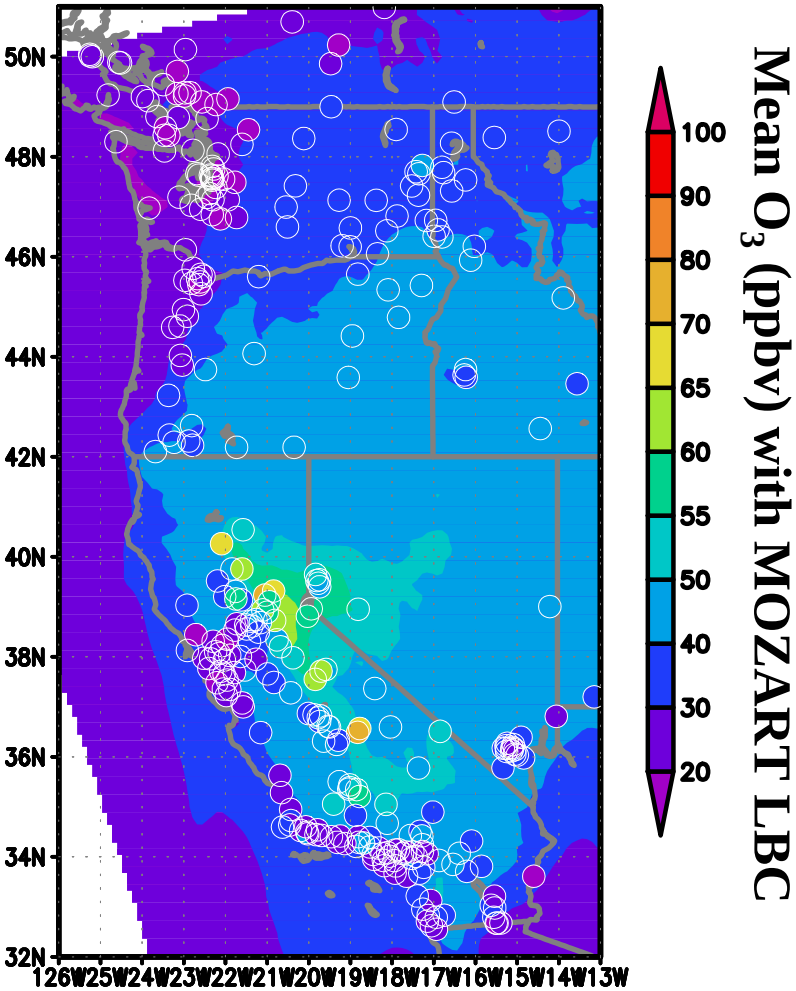




Mean Surface O_3 (ppbv) (Aug 1-5, 2006)

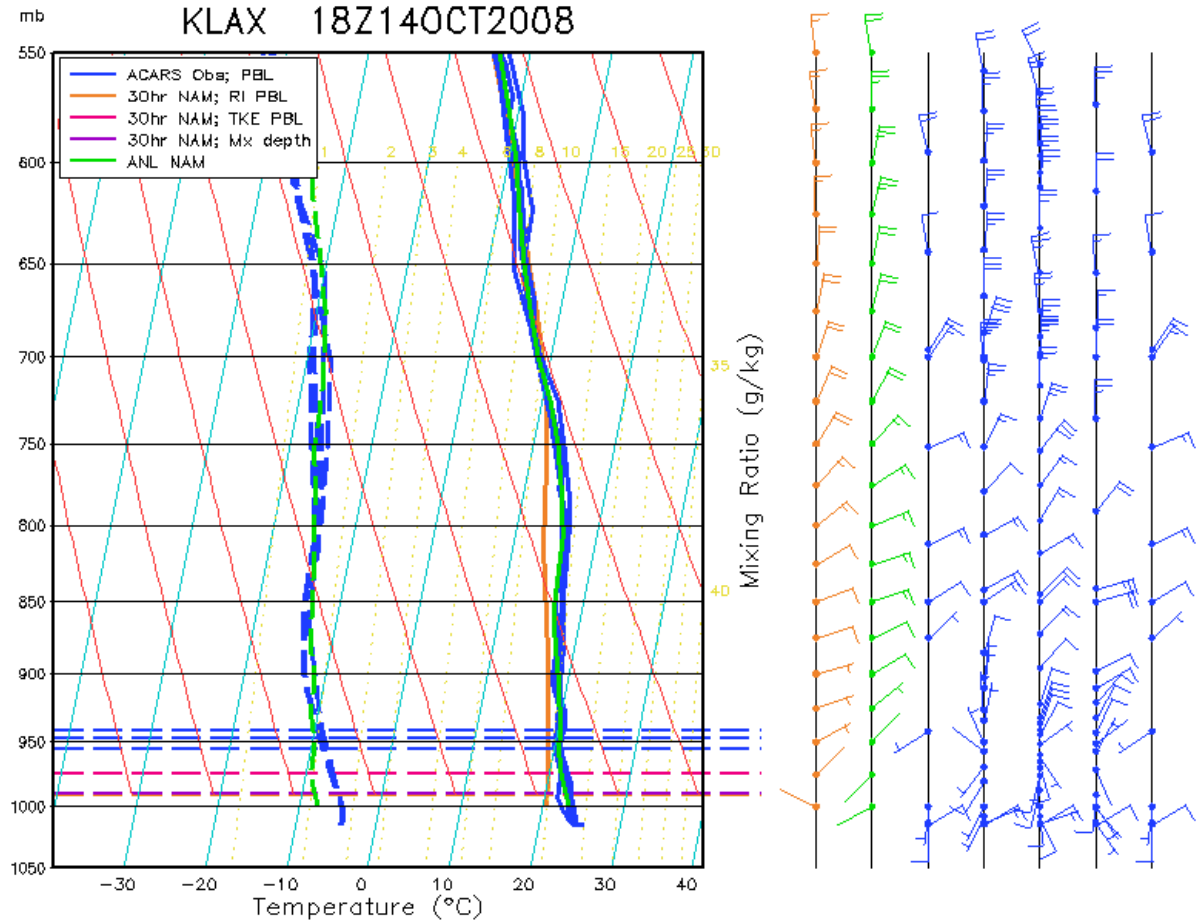
An example of regional-global model coupling

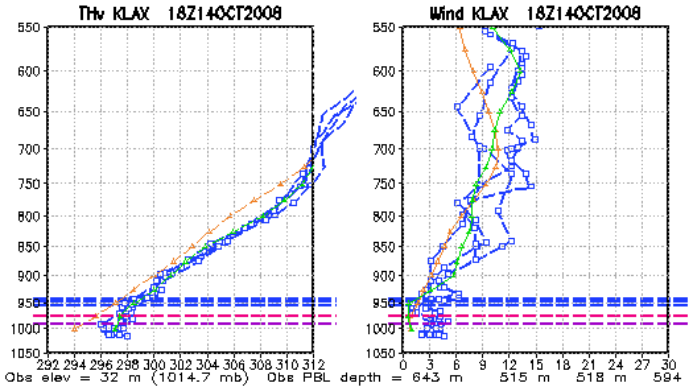


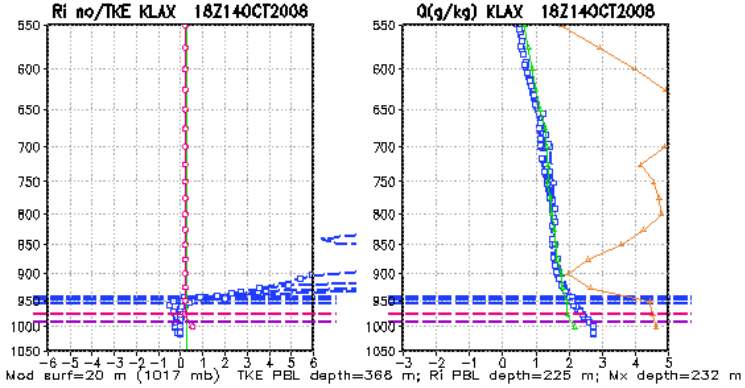


Mean Surface O_3 (ppbv) (Aug 1-5, 2006)

Obs PBL higher than TKE PBL







ACARS Obs; PBL

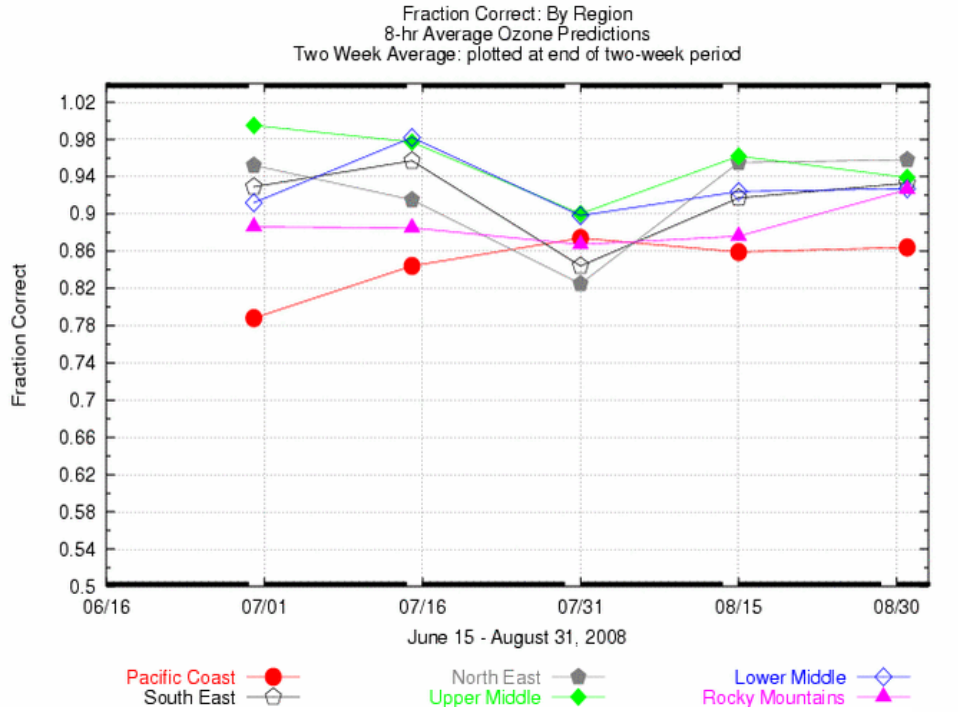
30hr NAM; RI PBL

30hr NAM; TKE PBL

30hr NAM; Mx depth

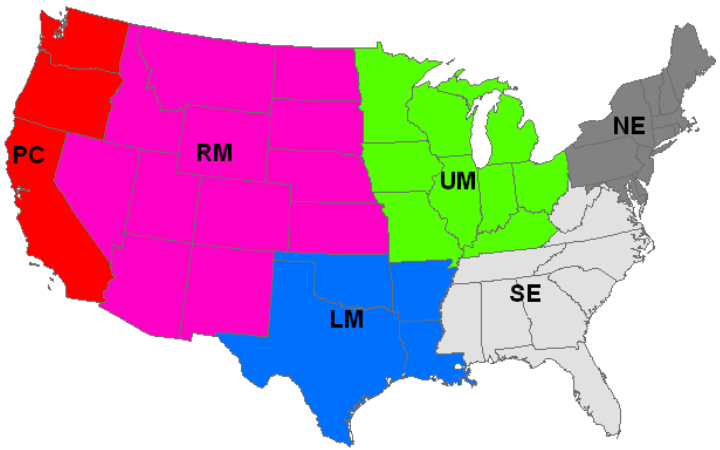
ANL NAM

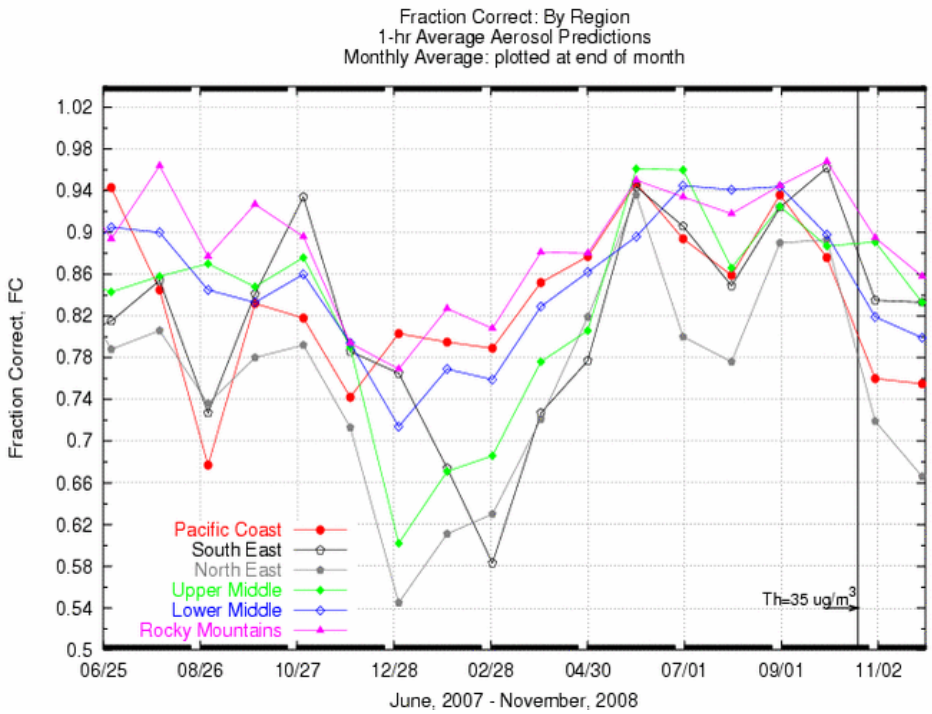
PBL verification over LA



Comparative Performance

←O_3 (CB05) and PM2.5 ↓





Courtesy J.Gorline