AUTOMATIC DAILY EVALUATION OF UH AQF SYSTEM

Southeast Texas Photochemical Modeling Technical Committee
Feb, 27, 2014

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UH AQF WEBSITE: SPOCK.GEOSC.UH.EDU
Air Quality Forecasting System

- Emission data
  - Emission modeling
    - SMOKE
- Meteorological data
  - Meteorological modeling
    - WRF
- CMAQ
  - Chemistry
  - Advection
  - Diffusion
  - Convection

Concentration of pollutants
DISCOVER-AQ
Houston:
September, 2013
O$_3$ and PM2.5 high days were shown for September 25-27.
O$_3$ FORECASTING OVER US (12km) ON FEB 24, 2014
PM25 forecasting over US (12km) on Feb 24, 2014
O$_3$ over Southeast Texas (4km) on Feb 24, 2014
PM2.5 over Southeast Texas (4km) on Feb 24, 2014.
O₃ Forecasting with
In-situ Measurement

- Blue color: in-situ measurement
- Red color: simulation
O₃ forecasting with in-situ measurement

- Blue color: in-situ measurement
- Red color: simulation
O$_3$ forecasting with in-situ measurement

- Blue color: in-situ measurement
- Red color: simulation
O₃ FORECASTING WITH IN-SITU MEASUREMENT

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PM2.5 Forecasting with In-Situ Measurement

- Blue color: in-situ measurement
- Red color: simulation
PM2.5 Forecasting with In-Situ Measurement

- Blue color: in-situ measurement
- Red color: simulation

482450021 Thomas Jefferson School C303 ( -93.9139, 29.9219 )

PM$_{2.5}$ [μg/m$^3$]

Feb 2014 (UTC)
PM2.5 FORECASTING WITH IN-SITU MEASUREMENT

- Blue color: in-situ measurement
- Red color: simulation
PM2.5 FORECASTING WITH IN-SITU MEASUREMENT

- Blue color: in-situ measurement
- Red color: simulation
PM2.5 forecasting with in-situ measurement

- Blue color: in-situ measurement
- Red color: simulation