P31 Continuous, near real-time evaluation of WRF- CMAQ: An approach for the rapid scientific evolution of the modeling system.

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Historically, EPA's Atmospheric Modeling and Analysis Division has evaluated retrospective, often annual length, simulations of WRF-CMAQ, summarizing the performance using monthly or seasonal statistics . While informative, such an approach often masks finer scale temporal (i.e. diurnal to weekly) and spatial (meso to synoptic) variability that influences the atmosphere and hence air quality. In order to maintain CMAQ's state-of-the-science status, as well as its ability to address emerging Agency needs, it is crucial that innovative evaluation approaches are developed and utilized that will allow for more rapid and hence more efficient evolution of the modeling system's science. Accordingly, the Divison began running WRF-CMAQ continuously and in near real-time (CMAQ-NRT) in 2014, following the (1) protocol established when EPA was directly involved with the National Air Forecast Capability (NAQFC), and (2) recent recommendations published in the Bulletin of the American Meteorological Society entitled: "The Emergence of Weather-Related Test Beds Linking Research and Forecasting Operations". Division scientists gather in bi-weekly meetings to discuss the model's performance (at finer spatial and temporal scales) while antecedent meteorological and air quality conditions remain familiar. This allows for immediate and ongoing analysis, thereby facilitating model evaluation (both performance and diagnostic) of PM2.5 and O3 concentrations.