SEMINAR SERIES PRESENTATION

Thursday, October 13th – NSSTC 4078 – 2pm

SPEAKER: **Dr. Arastoo Pour Biazar,** UAHuntsville, Earth System Science Center

TOPIC: **Improved Meteorological Simulations in Support of Air Quality Studies**

The utilization of air quality modeling (AQM) systems is becoming more prevalent in air quality decision making practices. Either it is a regulatory retrospective modeling or an air quality forecasting practice, the reliance on model results to make critical decisions demands accurate information from the model. There are many sources of uncertainty in an AQM simulation, emanating from meteorology, emissions, and atmospheric chemistry. However, uncertainties carried over from meteorological simulations have a dominant role as they impact transport, emissions and the chemistry. In collaboration with SPoRT, our group has been involved in utilizing satellite observations in AQMs to improve their performance and to make such improvements available to the air quality community. Examples include the recovery of surface moisture to improve model representation of the boundary layer and correcting photochemical reaction rates for the radiative impact of clouds. Current work focuses on assimilation of observed clouds in WRF. Since clouds play a critical role in air quality simulations, this activity is of outmost importance to the air quality community. Some of the results from this activity will be presented.

Snacks will be provided.