



SEMINAR SERIES PRESENTATION

Tuesday, April 30, 2013 – NSSTC 2096 – 9:00 AM

**SPEAKER: Dr. Emily Berndt, Postdoctoral Scientist (ORAU)
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**TOPIC: An Overview of Research Activities Related to the Influence of
Stratospheric Intrusions on High Impact Non-convective Wind Events**

ABSTRACT

Intense extratropical cyclones are often associated with non-convective high winds. Non convective winds are responsible for fatalities each year in the United States and can have devastating economic and societal impacts. There is no commonly accepted explanation for non-convective high winds associated with extratropical cyclones; however physical explanations include tropopause folds and the sting jet. Rapidly intensifying cyclones are commonly associated with stratospheric intrusions and tropopause folds. Therefore, the influence of stratospheric intrusions on the production of high surface winds will be investigated and the presence of the sting jet will be assessed in three case studies. The goal of this research is to diagnose the dynamical structure of non-convective wind events with NASA satellite imagery and demonstrate the impact of assimilation of high resolution satellite profiles on WRF model forecasts. An overview of future research and preliminary results from an event that impacted the Northeast United States on 09 February 2013 will be presented.

Refreshments will be provided