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## JOURNAL CLUB

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# Characteristics of Auroral Energy Deposition Discerned from Observations of Nitric Oxide in the Lower Thermosphere

by

Scott Bailey

*Geophysical Institute, Physics Dept. UAF*

### ABSTRACT

The presence of Nitric Oxide in the lower thermosphere is an indicator of energy deposited to that altitude region. At high latitudes, auroral electrons and the energetic secondary electrons provide the source of energy that leads to the large amounts of observed NO. Because the NO molecule has a lifetime of about one day, a high latitude observation of NO provides an indication of the integrated auroral energy deposition over the previous day.

The Student Nitric Oxide Explorer (SNOE) satellite has been observing NO in the thermosphere daily since February of 1998. Global observations of NO by SNOE reveal spatial and temporal properties of auroral energy deposition. In this talk we will present the NO observations and determinations of auroral energy input based on those observations. It is shown that there is both recurring longitudinal structure as well as strong seasonal behavior in the auroral energy deposition.

Friday, October 0, 2003  
Elvey Bldg. Globe Room  
3:45 pm