NEMI MEASUREMENT OF AURORAL NITRIC OXIDE PRODUCTION

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Sodankylä Geophysical Observatory, University of Oulu (SGO) and the Department of Meteorology, Stockholm University (MISU) have an accepted joint project, Night-Time Emissions from the Mesosphere and Ionosphere (NEMI), for the ALOMAR eARI HotPay 2 rocket scheduled for launch from Andøya Rocket Range in October 2007. NEMI has several related scientific purposes on its own, and additionally provides background measurements for a sodium emission experiment.

The main purpose of SGO in the NEMI project is in-situ quantification of the auroral production of nitric oxide (NO). The retrieval requires inverse modelling with the measured oxygen and NO_2 emissions as input. This talk will present the NEMI instrument and discuss the adaptation of the Sodankylä Ion Chemistry (SIC) model for the nitric oxide retrieval.