HiTIES

A High Throughput Imaging Echelle Spectrograph

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Proton aurora observational campaign:

The proposed campaign focuses on the understanding of the plasma and neutral processes induced in a region of intense keV proton precipitation and on the assessment of the subsequent response of the high latitude ionosphere and thermosphere. This campaign appeals to the high spectral resolution imaging instrument HiTIES we have recently developed at BU. Using a comprehensive auroral model, the optical data are analyzed to derive the particle characteristics. The interpretation of auroral emissions to infer ionospheric conductances in presence of proton aurora will also been investigated by combined experiments with optical instruments and the EISCAT UHF radar.

This campaign is in collaboration with Unni Pia Løvhaug from the University of Tromsø and with Fred Rees and Betty Lanchester from the University of Southampton. This campaign would have not been possible without the key help from Chris Hall and Bjørnar Hansen from the Tromsø Geophysical Observatory and from Knut Hellvig from EISCAT. Principal researchers involved in this campaign from the Center for Space Physics: Marina Galand, Jeff Baumgardner, Supriya Chakrabarti, Duggirala Pallamraju.

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