Technical Page

Proposal Type: Regular
General Category: Terrestrial Aeronomy
Sub-Category: Optical
Observation Category: Exosphere
Total Time Requested: 100 Hours
Minimum Useful Time: 4

Proposal Title: Swarm EFI Data Products Validation Using Incoherent Scatter Radars

ABSTRACT:
This proposal addresses validation of Swarm EFI (including Thermal Ion Imager and Langmuir Probe) data products through comparison with ground-based incoherent scatter radar (ISR) measurements of line-of-sight plasma drift velocity, plasma density, and ion and electron temperatures. While ISR signals are inherently noisy, there is a mature theory of the associated measurement errors. Assessment of EFI performance can be carried out statistically though repeated coincident measurements; we aim to obtain of the order of 100 such comparisons (more if possible) using ISR facilities located in Canada, Europe, the US, and South America.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
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</thead>
<tbody>
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</tbody>
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Remote Observing Request

- X Observer will travel to AO
- [ ] Remote Observing
- [ ] In Absentia (instructions to operator)

Instrument Setup

430 CH receiver

Atmospheric Observation Instruments:

- Fabry-Perot Ionosonde

Special Equipment or setup: if the conditions are appropriate for optical observing, the data will be useful

RFI Considerations
Frequency Ranges Planned