**Proponents**: Pontus C. Brandt<sup>1</sup>, Kurt Retherford<sup>2</sup>, Andrew Steffl<sup>2</sup>, Randy Gladstone<sup>2</sup>, Masaki Fujimoto<sup>3</sup>, Ichiro Yoshikawa<sup>4</sup>, A. Yamazaki<sup>3</sup>



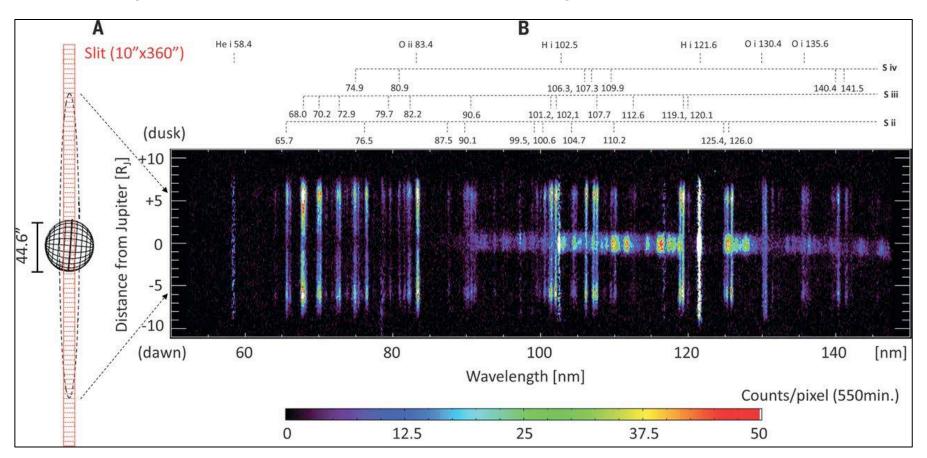
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<sup>&</sup>lt;sup>3</sup>ISAS/JAXA, Sagamihara, Japan.

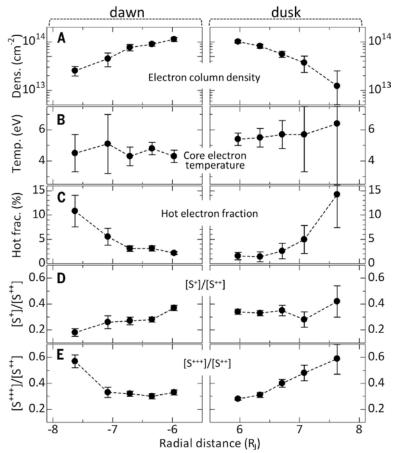
<sup>&</sup>lt;sup>4</sup>University of Tokyo, Tokyo, Japan.

# A wealth of information on the lo plasma torus and Jupiter aurora



A recent correlation in S+ density enhancement with a volcanic outburst at Io is particularly compelling

- EXCEED is a UV telescope on board the JAXA mission Hisaki in orbit around Earth
- Primary Objective is to observe the lo Plasma Torus and Jovian aurora
- Secondary Objective is to observe Mars and Venus
- Mission extension through end of 2017 has been endorsed at Steering Committee Level, but not yet at ISAS Level.
- An informal community email list already exists
  - hisaki\_sci@c.gp.tohoku.ac.jp; exceed@c.gp.tohoku.ac.jp



One of the first results from the EXCEED observations of the Io Plasma Torus reporting electron temperatures (Yoshioka et al., Science, 2014).

### Why?

- Enhance science return from EXCEED through analysis, modeling, or coordinated observations with Juno, HST, and Maven
- Increase our understanding of the lo torus to optimize Europa Mission & JUICE science plans
- Widens dissemination of EXCEED results to justify its continued operations and mission extension

#### How does it work?

- Candidates submit proposals through ROSES
- If funded, you would become a NASA Participating Scientist within the EXCEED Science Team
- Funding usually moderate, but sufficient to participate in team meetings, analysis and disseminate results through papers and presentations

- Suggested next steps (NASA needs to weigh in here)
  - Start with a recommendation from OPAG in this meeting report
  - Collect ideas for the scope and size of the program
  - OPAG Chair to discuss further with NASA and NAC/PSS
  - NASA to amend it to ROSES 2015

#### Example report statement

OPAG recommends that NASA-SMD add a Participating scientist program call within a ROSES 2015 amendment to facilitate the further involvement of US scientists in the EXCEED investigation on the JAXA Hisaki mission. The results obtained will support ongoing Juno, MAVEN, and HST programs within the program period and will better inform the plans for future Europa Mission and JUICE investigations. NASA's support would provide additional rationale for extending Hisaki's science mission beyond 2017.

If you support this idea please send email to <a href="mailto:pontus.brandt@jhuapl.edu">pontus.brandt@jhuapl.edu</a> and <a href="mailto:kretherford@swri.edu">kretherford@swri.edu</a>, Subject: EXCEED