
[JJ] Evening Poster | P (Space and Planetary Sciences) | P-PS Planetary Sciences

[P-PS08]Planetary Sciences

convener: Takaya Okamoto (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency), Kenji Kurosaki (Department of Physics, Nagoya University)

Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

We call for general interest papers for Planetary Sciences. Planetary Sciences consist of a variety of studies on the past, present, and future of our solar system and exoplanetary systems. Discussions based on various backgrounds are encouraged.

[PPS08-P16]Synchrotron emission modeling for the Jovian environment

*virgil adumitroaie¹, Steven Levin¹, Michael Janssen¹, Fabiano Oyafuso¹, Shannon Brown¹, Daniel Santos-Costa², Scott Bolton² (1. Jet Propulsion Laboratory, 2. Southwest Research Institute)

Keywords: Jupiter, Synchrotron emission

The atmospheric composition retrieval from Jupiter's radiation signature via Juno's MWR instrument, it is necessary to separate as robustly as possible the contributions from three emission sources: CMB, planet and synchrotron radiation belts. The numerical separation requires a refinement, based on the in-situ data, of a higher fidelity model for the synchrotron emission, namely the multi-parameter, multi-zonal model of Levin et al. (2001). This model employs an empirical electron energy distribution, which prior to the Juno mission, has been adjusted exclusively from VLA observations. The challenges and approaches taken to perform this task are discussed here. The model will be continuously improved with the availability of additional information, both from the MWR and magnetometer instruments.