Geophysical Research Abstracts
Vol. 20, EGU2018-11435, 2018
EGU General Assembly 2018

Juno Ultraviolet Spectrograph Observations of Jupiter's Aurora

Vincent Hue (1), G. Randall Gladstone (1), Thomas K. Greathouse (1), Maarten Versteeg (1), Bertrand Bonfond (2), Michael W. Davis (1), Joshua Kammer (1), Denis C. Grodent (2), Jean-Claude Gérard (2), Scott J. Bolton (1), Steven Levin (3), and John E. P. Connerney (4)

(1) Southwest Research Institute, Department of Space Science, San Antonio, United States (vhue@swri.org), (2) STAR Institute, LPAP, Université de Liège, Liège, Belgium, (3) Jet propulsion Laboratory, Pasadena, CA, (4) NASA Goddard Space Flight Center, Greenbelt, MD

Juno is currently on an elliptical polar orbit around Jupiter, since July 2016, and has successfully gathered data during 10 perijoves sequences. Juno offers a fantastic opportunity to study Jupiter's magnetosphere and its spectacular auroras, which can be seen as a window screen of the entire Jovian magnetosphere. Juno not only allows for the first time to perform in-situ measurements of the particles while looking at their corresponding auroral emissions, it also gives access to unprecedented observing geometries for these emissions. The Juno Ultraviolet Spectrograph (UVS) is a UV spectrograph with a bandpass that spans 70 to 205 nm and is designed to characterize Jupiter's UV emissions. In this talk, we present an overview of Juno-UVS operations and summarize the main findings obtained after 11 perijoves. We present UV images and color ratio maps of both the northern and southern auroras of Jupiter and present a comparison with simultaneous UV-observations from the ongoing Hubble campaign supporting Juno. We discuss how the observed features evolve over a wide range of timescales utilizing data from the first perijove (PJ1, August, 27th 2016) up until PJ11 (February, 7th 2017).