



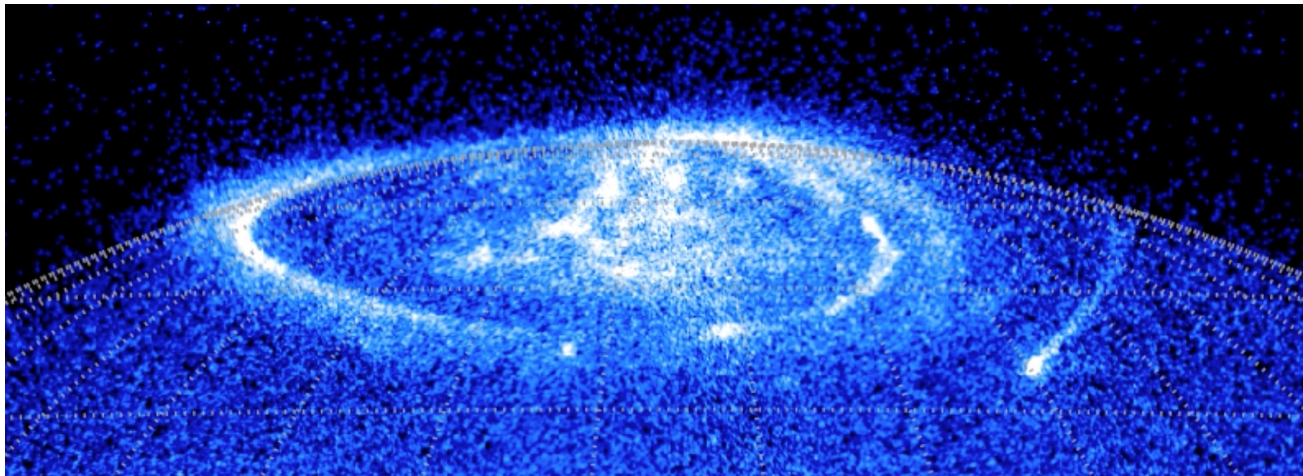
## P24B-01: Jupiter's auroras during the Juno approach phase as observed by the Hubble Space Telescope

**Tuesday, 13 December 2016**

**16:15 - 16:30**

📍 Moscone West - 2009

We present movies of the Hubble Space Telescope (HST) observations of Jupiter's FUV auroras observed during the Juno approach phase and first capture orbit, and compare with Juno observations of the interplanetary medium near Jupiter and inside the magnetosphere. Jupiter's FUV auroras indicate the nature of the dynamic processes occurring in Jupiter's magnetosphere, and the approach phase provided a unique opportunity to obtain a full set of interplanetary data near to Jupiter at the time of a program of HST observations, along with the first simultaneous with Juno observations inside the magnetosphere. The overall goal was to determine the nature of the solar wind effect on Jupiter's magnetosphere. HST observations were obtained with typically 1 orbit per day over three intervals: 16 May – 7 June, 22-30 June and 11-18 July, i.e. while Juno was in the solar wind, around the bow shock and magnetosphere crossings, and in the mid-latitude middle-outer magnetospheres. We show that these intervals are characterised by particularly dynamic polar auroras, and significant variations in the auroral power output caused by e.g. dawn storms, intense main emission and poleward forms. We compare the variation of these features with Juno observations of interplanetary compression regions and the magnetospheric environment during the intervals of these observations.



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