

Statistical analysis of post-equinoctial Uranus' aurorae and implications on the role of solar wind

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Abstract

The re-detection of Uranian Ultraviolet aurorae with the Hubble Space Telescope in 2011, 4 years after equinox, during active solar wind conditions provided a novel opportunity to study the Uranus' asympmetrical magnetosphere and its interaction with the solar wind over the Uranian revolution around the sun. The identified signatures were tentatively attributed to intermittent magnetic reconnection with the interplanetary magnetic field. I will present more recent HST observations obtained in 2012 and 2014 with variable solar wind conditions. They revealed additional detections which, in turn, seem to indicate a prominent role of the solar wind in driving auroral precipitations