

CONTROL ID: 1801629

TITLE: Saturn's UV aurora: the (high latitude) point of view of Cassini
(Invited)

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ABSTRACT BODY: The high latitude vantage point of Cassini and its short distance to Saturn give rise to a unique opportunity for obtaining exceptional spectral images of the aurorae, along with in situ observations of the associated particles and magnetic field. Cassini's T83 flyby of Titan significantly changed the inclination of the spacecraft's orbit and marked the beginning of the XXM inclined phase 1 which will last until March 16, 2015.

We will give an overview of the auroral emissions observed so far with the UVIS camera on board Cassini. In particular we will link the morphology of the aurora with specific magnetospheric processes, such as dayside reconnection and auroral bifurcations, nightside reconnection, hot plasma injections. We will also take advantage of the view from nearly above the poles to describe the overall shape and size of the aurora, which are expected to respond to the solar wind conditions. Moreover, this presentation will focus on small-scale features, which can only be observed by an instrument close enough to the planet. We will also present movies of these observations, allowing us to explore the auroral dynamics at various timescales. This information will be used to identify the various mechanisms at play in Saturn's magnetosphere.

KEYWORDS: 5706 PLANETARY SCIENCES: FLUID PLANETS Aurorae, 6275 PLANETARY SCIENCES: SOLAR SYSTEM OBJECTS Saturn, 5737 PLANETARY SCIENCES: FLUID PLANETS Magnetospheres.

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Additional Details

Previously Presented Material: 50% of this material will be presented at EPSC 2013.

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TITLE OF TEAM:
