



## **Titan's extended atmosphere: INCA results**

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During the Titan flybys INCA obtained ENA images of the interaction between the atmosphere of Titan and the magnetospheric ion fluxes sweeping over Titan with subcorotational speeds ( $\sim 145$  km/s). The ENA images show highly variable ENA fluxes from Titan due to the structure in the magnetospheric ion population. The ENA fluxes extend out to several 10,000 km altitude from the surface of Titan. We use a parametric neutral atmosphere model consisting of H, H<sub>2</sub>, N, and CH<sub>4</sub> to simulate Hydrogen and Oxygen ENA images in the 20-80 keV range and compare to the images obtained by INCA. Several events are analyzed to investigate how the H<sub>2</sub> distribution falls off with altitude.