ID de Contribution: **105** Type: **Oral presentation**

Study of trace species in the atmosphere of Titan

vendredi 25 mars 2022 16:00 (10 minutes)

Titan is the second-largest moon in our solar system and has a thick atmosphere. It has nitrogen (94.2%) and methane (5.65%) as it's major constituents, with a lot of trace gases. Methane and nitrogen split due to the sun's ultraviolet rays and high energetic particles (from Saturn's magnetic field), and this results in a variety of organic compounds in the atmosphere. In this research, I am trying to quantify and develop vertical profiles of these trace species using a mass spectra deconvolution code. Data for this study has been taken from Huygens GCMS. The code runs Monte Carlo simulations to vary the intensity of individual fragments and develop vertical profiles of species with poorly known fragmentation patterns. This work shows vertical profiles of ten known species for 10000 simulations.

Field

Planetology (including small bodies and exoplanets)

Day constaints

23/03, 24/03,25/03

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Classification de Session: Talk

Classification de thématique: Astrophysics