ID de Contribution: **91** Type: **Oral presentation**

ANALYSIS OF ORGANIC MATTER AND MINERAL PHASES IN CM CHONDRITES BY TOF-SIMS COUPLED WITH IMAGING

mercredi 23 mars 2022 11:10 (10 minutes)

The study of CM chondrites allows to obtain information from the first steps of the Solar System history and so better understand the origin of the organic matter. The aim of this study is to determine how the organic compounds structure varies and how they are related to the mineral phases depending on the hydrothermal alteration of the chondrites.
I will present Time Of Flight Secondary Ion Mass Spectrometry (TOF-SIMS) analysis coupled with imaging of slices of different chondrites: Cold Bokkeveld (CM2.2) and Paris (CM2.7-2.9). TOF-SIMS give the atomic and molecular composition, the structure of the organic and mineral phases and thanks to the imaging, the co-localization of those phases. I will focus on the distribution of the different organic families in the samples and their structural properties. Those results will be compared to previous InfraRed (IR) reflectance hyperspectral imaging and Raman analysis.

Field

Planetology (including small bodies and exoplanets)

Day constaints

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Classification de Session: Talk

Classification de thématique: Astrophysics