

Abstract

MNRAS (*Monthly Notices of the Royal Astronomical Society*), **469**, Suppl 2, S492-S505 (2017)

Oliver J. Stenzel, Martin Hilchenbach, Sihane Merouane, John Paquette, Kurt Varmuza, Cécile Engrand, Franz Brandstätter, Christian Koeberl, Ludovic Ferrière, Peter Filzmoser, Sandra Siljeström:

Similarities in element content between comet 67P/Churyumov-Gerasimenko coma dust and selected meteorite samples.

<https://doi.org/10.1093/mnras/stx1908>

We have analysed the element composition and the context of particles collected within the coma of 67P/Churyumov–Gerasimenko with Rosetta’s COMetary Secondary Ion Mass Analyzer (COSIMA).

A comparison has been made between on board cometary samples and four meteorite samples measured in the laboratory with the COSIMA reference model.

Focusing on the rock-forming elements, we have found similarities with chondrite meteorites for some ion count ratios. The composition of 67P/Churyumov–Gerasimenko particles measured by COSIMA shows an enrichment in volatile elements compared to that of the investigated Renazzo (CR2) carbonaceous meteorite sample.