

## **Composition of dust particles collected in the inner coma of Comet 67P/Churyumov-Gerasimenko as measured by COSIMA onboard Rosetta**

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The study of comets is important for the understanding of the origin of the solar system and life on Earth as they are considered remains of the earliest solar system. The Comet SIMS analyser (COSIMA), a miniaturized time-of-flight secondary ion mass spectrometer (ToF-SIMS), is one of the instruments onboard the orbiter of the Rosetta mission which arrived to comet 67P/Churyumov-Gerasimenko in mid-2014. COSIMA analyses the mineral and organic composition of dust particles that are captured on metal targets exposed to space. Since mid-August 2014, COSIMA has detected more than 25, 000 cometary particles of different morphology and composition from the inner coma at different positions along the pre- and post-perihelion orbit. After collection these particles have been imaged with the microscope COSISCOPE, and analysed by SIMS. In this presentation an overview will be given on the results obtained so far by COSIMA. The morphology and the composition of the detected dust will be described, including data on the organic component of the dust particles.