The dust environment of 67P/Churyumov-Gerasimenko: a multi-instrument perspective

The ESA's Rosetta spacecraft had the unique opportunity to follow comet 67P/Churyumov-Gerasimenko (hereafter 67P) for about 2.5 years – from January 2014 to September 2016 – observing how the comet evolved while approaching the Sun, passing through perihelion and then moving back into the outer solar system. Remote sensing and in-situ instruments onboard Rosetta acquired data to study the comet's dust environment during the entire duration of the mission, while telescopes followed the large-scale coma and tails from Earth.

Individual instrument data analyses have been carried on in the last years, providing a first characterization of 67P dust environment. Multi-instruments data analyses are now in progress as a step forward and are providing critical results for a more comprehensive and unified knowledge of cometary dust environments. We will illustrate the progress we have made and the results we have reached following this constructive and collaborative approach.