



High-time resolution measurements of cometary ions around 67P

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The ion environment around comet 67P/Churyumov-Gerasimenko is highly structured. Ion density, energy distribution and flow direction change on time-scales of 10s of seconds.

To be able to study such fast changes a new measurement mode was implemented for the Ion Composition Analyzer (ICA), which is part of the Rosetta Plasma Consortium (RPC). In this mode the ion spectrometer RPC-ICA observes ions in a plane (2D) with a resolution of 1 s or 4 s.

We present measurements made with this mode and investigate what the typical time scale of variations in the ion environment is. We also study if this time scale changes throughout the mission and how the short time-scale variations depend on, for example, spacecraft potential, distance to the comet and magnetic field direction.