



Two-point observations of low-frequency waves at 67P/Churyumov-Gerasimenko: Comparison of RPC-MAG and ROMAP

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The European Space Agency's spacecraft ROSETTA has reached its final destination, the comet 67P/Churyumov-Gerasimenko. ROSETTA is equipped with two tri-axial fluxgate magnetometers; one is part of RPC - the ROSETTA Plasma Consortium - located at a boom on the orbiter and named RPC-MAG. The other one is part of the lander plasma monitor ROMAP and located on a boom of the lander PHILAE.

Since ROSETTA has reached a distance of 100 km to the comet, low frequency oscillations of the magnetic field with frequencies of about 50 mHz were measured with different amplitudes at different distances. After the detachment of PHILAE from the ROSETTA orbiter on November 12, 2014 two-point measurements at separate locations became possible and were used in order to reveal detailed properties of the observed waves. In particular, estimation of the wavelength of these comet generated waves are possible as well as the correlation length can be determined using RPC-MAG and ROMAP magnetometer measurements at different locations at the same time. Thereby further insight on the mode of the excited waves is received.