



Rosetta Lander – Philae: First Landing and Operations on a Comet

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Philae is a comet Lander, part of Rosetta which is a Cornerstone Mission of the ESA Horizon 2000 programme. In August 2014 Rosetta did rendezvous with comet 67P/Churyumov-Gerasimenko (CG) after a 10 year cruise. Both its nucleus and coma have been studied allowing the selection of a landing site for Philae. Philae was separated from the Rosetta main spacecraft on November 12, 2014 and touched the comet surface after seven hours of descent. After several bounces it came to rest and continued to send scientific data to Earth. All ten instruments of its payload have been operated at least once. Due to the fact that the Lander could not be anchored, the originally planned first scientific sequence had to be modified.

Philae went into hibernation on November 15th, after its primary battery ran out of energy. Re-activation of the Lander is expected in spring/summer 2015 when CG is closer to the sun and the solar generator of Philae will provide more power.

The paper will give an overview of separation, descent and landing, the search for the final landing spot as well as Lander operations after separation.

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