SPACE EXPLORATION SYMPOSIUM (A3)
Small Bodies Missions and Technologies (4)

Author: Dr. Stephan Ulamec
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, stephan.ulamec@dlr.de

Dr. Jens Biele
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, jens.biele@dlr.de
Mr. Alejandro Blazquez
Centre National d'Etudes Spatiales (CNES), France, alejandro.blazquez@cnes.fr
Mrs. Barbara Cozzoni
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, barbara.cozzoni@dlr.de
Mrs. Cinzia Fantinati
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, cinzia.fantinati@dlr.de
Mr. Philippe Gaudon
Centre National d'Etudes Spatiales (CNES), France, philippe.gaudon@cnes.fr
Dr. Koen Geurts
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, koen.geurts@dlr.de
Mr. Eric Jurado
Centre National d'Etudes Spatiales (CNES), France, Eric.Jurado@cnes.fr
Mr. Oliver Küchemann
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, oliver.kuechemann@dlr.de
Mr. Michael Maibaum
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, michael.maibaum@dlr.de
Mrs. Brigitte Pätz
Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, brigitte.paetz@dlr.de
Dr. Holger Sierks
Max Planck Institute, Germany, sierks@mps.mpg.de

ROSETTA LANDER – PHILAE: LANDING PREPARATIONS

Abstract

Rosetta is a Cornerstone Mission of the ESA Horizon 2000 programme. It is going to rendezvous with comet 67P/Churyumov-Gerasimenko after a ten year cruise and will study both its nucleus and coma with an orbiting spacecraft as well as with a Lander, Philae. Aboard Philae, a payload consisting of ten scientific instruments will perform in-situ studies of the cometary material.

Rosetta and Philae have been in hibernation until January 20, 2014. After the successful wakeup they will have undergone a post hibernation commissioning. The orbiter instruments (like e.g. the OSIRIS cameras, VIRTIS, MIRO, Alice and ROSINA) will characterize the target comet and its environment to allow landing site selection and the definition of a separation, descent and landing (SDL) strategy for the Lander. By September 2014 our currently poor knowledge of the characteristics of the nucleus of the comet will have increased drastically and the nominal and backup landing site will be selected. The paper will report on the latest updates in Separation-Descent-Landing (SDL) planning. Landing is foreseen for November 2014 at a heliocentric distance of 3 AU.

The paper will give an overview of the Philae system, the operational activities after hibernation and

the latest status on the preparations for landing.