SPACE EXPLORATION SYMPOSIUM (A3)

Moon Exploration - Part 2 (2B)

Author: Mr. Friedhelm Claasen

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, friedhelm.claasen@dlr.de

Mr. Norbert Henn

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, norbert.henn@dlr.de Mr. Carsten Henselowsky

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, carsten.henselowsky@dlr.de Mrs. Britta Schade

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, Britta.Schade@dlr.de Mr. Volker Schmid

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR), Germany, Volker.Schmid@dlr.de

OUR MOON - THE NEXT STOPOVER FOR EXPLORATION

Abstract

The German Space Agency DLR is continuing its Exploration efforts on national and international level. Although the Lunar Exploration Orbiter (LEO) Project got no funding in 2009, government confirmed that Lunar Exploration is one of its space political goals. The Moon remains a focal point for Germany via its ESA-participation and in the National Programme, but, due to the overall economic situation, LEO was put to a dormant mode for the year 2009 and the budget request now has been reformulated for a project continuation in 2010. In parallel, a strong national space budget increase could be achieved in 2009 and following years especially for robotic activities, and a part of that is supporting robotic exploration, too. A corresponding program line was established, aiming at a series of projects for orbit robotics and exploration robotics, including planning for a full lunar mission consisting of an orbiter, lander and rover mobility. Other national studies prepare for Reversible Fuel Cells, Life Support Systems, In-situ Resource Utilization and a terrestrial Lander Demonstrator. This national preparatory work is compliant with German contributions to and participation in ESA activities, as it was decided during the ESA Council on Ministerial Level end 2008 in The Hague. The continuation of the ExoMars project was confirmed with a limited budget. New decisions to bring forward the exploration activities have been taken in case of the new programmes e.g. for European transportation with the definition of an Advanced Reentry Vehicle, derived from the ATV providing cargo return capabilities, for studies and technologies for the exploration of the Moon including a lunar lander for a then selected mission scenario and to promote exploration. On international level Germany is participating in the coordination and cooperation activities of the ISECG, ILN, IMEWG and ILEWG. The paper to be presented gives with a focus on the Moon - the actual status report on the ongoing German Exploration activities, its programmatic orientation and related study results.