Paper ID: 12444
oral

Using the ISS to Prepare for Exploration (01)
ISS as the Foundation for Exploration (1)

Author: Dr. Patrik Sundblad
ESA, Sweden, patsu@kth.se

Prof. Christer Fuglesang
KTH, Sweden, christer.fuglesang@esa.int
Dr. Martin Zell
European Space Agency (ESA), The Netherlands, Martin.Zell@esa.int

EUROPEAN SCIENCE ON ISS FOR EXPLORATION

Abstract

Exploring space is also utilising the unique conditions of space for novel science. We go to space to explore and learn about the moon, other planets and stars as well as the whole universe. Space is used to explore the Earth, from a most advantageous view point. And the weightlessness offered by freefalling space vehicles, as the International Space Station, is used to investigate phenomena in a wide field from physics to biology and human physiology. The science pursued is both to still our natural human curiosity, to find applications for a better life on Earth and to find technological solutions for future deep space explorations by humans. The European Life and Physical Sciences in Space (ELIPS) program within the European Space Agency's directorate of Human Spaceflight and Operations, is aimed primarily towards exploiting the conditions on ISS for scientific investigations. However, within that context it also looks into preparations for human exploration of deep space and it ties this with experiments on ground, such as bed rest studies and isolation studies. This presentation will describe the activities within ELIPS most relevant for space exploration and discuss further possibilities on what can be done for the moon and Mars.