

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
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ACHIEVEMENTS, PLANS AND OUTLOOK OF THE EUROPEAN ISS UTILISATION PROGRAMME

Abstract

In early 2008 ESA's Columbus Module was launched and installed on the ISS as a permanent laboratory. After a short initial on-orbit commissioning period the utilisation programme has been progressing well and more than 50 European experiments have been successfully conducted using ESA's multi-user rack facilities Biolab, Fluid Science Lab, European Physiology Modules and European Drawer Rack and further NASA racks in the Columbus and Destiny labs. The European Technology Exposure Facility (EuTEF) with 13 experiments has been retrieved after 1.5 years of exposure to open space and due to the high scientific interest the SOLAR payload operation will be extended by another 3 years until at least 2013. With the permanent 6-crew availability and the deployment completion of ESA's pressurized research infrastructure elements Material Science Lab (MSL) and the Muscle Atrophy Resistive Exercise System (MARES) the European ISS utilisation programme produces invaluable scientific data and allows research advancements throughout the broad field of Life and Physical Sciences as well as for Human Exploration preparation. Recent Announcements of Opportunity have demonstrated the high interest of the user community which is a strong justification for the extension of the ISS exploitation to 2020 and beyond. The paper will give a comprehensive overview on the preliminary European research achievements. Further an outlook will be given on ESA's long-term utilisation strategy for ISS and the benefits of international research cooperations.