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THE ITALIAN SPACE AGENCY UTILIZATION OF THE INTERNATIONAL SPACE STATION:
2001-2012 AND BEYOND

Abstract

Per effect of the MPLM Memorandum of Understanding between the NASA and the Italian Space Agency, Italy has benefitted since 2001 from a share of ISS utilization resources. Those resources have been allocated to a number of experiments, mostly in the field of the Life Science. Starting with the ESA payload APCF, ASI has used its share to accommodate 18 payloads and conduct crew operated experiments for more than 130 hours of astronaut's crew time and leading to about 50 scientific investigations.

The paper presents the utilization experience carried out by ASI in developing its payloads for the ISS, including payloads currently on board (VIABLE, ALTEA, Elite-S2) and the first animal facility for the ISS (MDS); in integrating and performing the related on-board experiments; in managing and coordinating the overall utilization process. As well, an overview of the scientific investigations performed and of relevant outcomes is provided.

As the Italian astronaut Paolo Nespoli and Roberto Vittori STS flights were complemented by a plan of experiments, integrated and carried on-board respectively to the STS-120 and STS-134, the Esperia and the DAMA missions are described too.

Finally, the paper provides an overview of the ASI plans for future utilization, with focus on the research complements being organized around the upcoming Italian astronauts flights of 2013 and 2015.