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THE ISS UTILIZATION STRATEGY OF THE ITALIAN SPACE AGENCY

**Abstract**

The Italian Space Agency has today a twofold access to the utilization resources (crew time, volume, mass, ect) provided by the International Space Station. The main access is the ASI/NASA MoU for the MPLM/PMM modules, and the other is through the European Space Agency, being Italy one of the main contributors. Finally, ASI has recently exploited the possibility to build up new agreements with ESA for ESA ISS resources to be exploited by national space agencies.

In the frame of the MoU with NASA, and through the support of the ISS Utilization program, over the years ASI has carried out 69 investigations in the fields of biology and biotechnology, human research, physical science, technology demonstrations, and educational activities,.

Moreover, an agreement with ESA for the mission BEYOND allowed ASI to carry out three new experiments, successfully completed in orbit in the period from July 2019 to February 2020. Finally, a specific agreement with ROSCOSMOS allowed ASI to bring onboard the ISS the experiment Mini-EUSO.

The purpose of this paper is to describe how ASI collects and maintains relevant information and statistics about all the Italian payloads launched to the ISS. Statistics is provided on each area of interest, highlighting the large number of Italian experiments in the area of the Human Research and Biology/Biotechnology.

A clear overview of the utilization vs. benefits of the Italian payloads is provided, thus underlying the importance of the contribution of the ASI investigations to academic research and to scientific and technological developments. The evidence of such contribution to scientific research is given by the publications of the Italian Scientists on journals having high Impact Factor.

Also, this paper shows how the outcomes of the ASI scientific research are managed according to a dedicated strategy in order to promote dissemination of the research results towards the international community.

The final goal is to show the perspective of the future Italian utilization of the ISS, underlying the benefits that ISS space experiments provide to human kind.

Keywords: ASI, ISS utilization, humankind benefit, science, experiment statistics