

IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations - IAF SPACE EDUCATION AND OUTREACH SYMPOSIUM (IPB)

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MISSION MINERVA: THE ESA-ASI EDUCATION ACTIVITIES TO TACKLE EDUCATIONAL
POVERTY IN VIEW OF DEVELOPING THE FUTURE SPACE WORKFORCE

Abstract

The return of the European Space Agency (ESA) astronaut of Italian nationality Samantha Cristoforetti on board the Crew Dragon Freedom spacecraft of Space X on 14 October 2022 marked the successful completion of her second ESA mission to the International Space Station (ISS), named MINERVA. The purpose of this paper is to describe the educational activities meant to inspire the youngsters, tackle educational poverty and nurture the future STEM and space workforce, jointly developed by ESA and the Italian Space Agency (ASI), in collaboration with ESERO Italy, around the MINERVA mission.

The ESA Education Office, in close collaboration with the Directorate of Human Spaceflight and Robotics Exploration, develops educational programmes jointly with national space agencies, involving national ESERO offices, for each ESA astronaut mission to the ISS. The programmes target various age groups and include up to two live video calls (inflight calls) between the astronaut on the ISS and groups of pupils and teachers.

The ASI Education Office runs educational and outreach activities for each Human Spaceflight Mission to the ISS involving Italian astronauts.

ESERO Italy is a joint ESA-ASI programme, with the support of a wide range of national organizations active in education and the space sector. ESERO Italy offers free certified training courses for teachers in STEM subjects, innovative teaching materials, interdisciplinary projects and inspirational events, with a focus on inclusivity.

From ESA and ASI Education strategies points of view, the jointly developed education programme around Samantha Cristoforetti's MINERVA mission had the key objective of attracting and involving teachers and pupils, including the unprivileged ones, in STEM activities and, in doing so, create awareness:

- for young people, especially those who do not have easy access to STEM inspiration opportunities, the existence of a European Space Programme, of which Italy plays a fundamental and preeminent role, and the careers opportunities that space offers to the new generation, everybody included;
- for educators, the importance and the benefits of participating in training on STEM subjects and inclusive education activities using astronauts as role models, and the use of space facilities like the ISS as an educational platform, to encourage pupils towards STEM studies;

- for stakeholders, the importance of partnerships between institutions, merging the international and national dimensions, for the achievement of shared educational objectives.

Success factors and impact of the above education activities will also be presented in the session.