

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
NEW WORLDS - INNOVATIVE SPACE EDUCATION AND OUTREACH (4)

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AOUDA.X – LESSONS LEARNED FROM A HIGH PROFILE SCIENCE-EDUCATION PARTNERSHIP
PROJECT

Abstract

In the framework of the PolAres research programme of the Austrian Space Forum four schools joined the project team to develop a fully functional Mars exploration spacesuit simulator. Supported by the Austrian Federal Ministry for Transportation, Innovation and Technology under the newly established Generation. Innovation funding scheme, a novel approach to embed students into the projects teams was taken. These junior project team members were aged between 13 and 18 years both from engineering and non-engineering schools including a design class with specialization in textile manufacturing which was comprised of 24 femals out of 25 students.

The schools participated right from the initial system requirement definition process up to the prototype commissioning of the hardware. The handling of milestones, documentation, testing standards, complementary research, financial management, press activities and outreach as well as creative processes have been modeled like in a real world space environment, e.g. students had to prepare and organize preliminary and critical design reviews, where they had to defend their work in front of external review boards. In this paper we present the gender aspects and lessons learned, e.g. what amount of training efforts and management issues which are ideosyncratic to projects with student participation were necessary. After one year and several thousands of work hours and substantial intellectual support from the Austrian Space Forum as well as highly experienced external consultants, a 45 kg spacesuit simulator, dubbed Aouda.X was commissioned in a Mars-like marvel quarry in Kramsach/Austria.