

SPACE EXPLORATION SYMPOSIUM (A3)
Moon Exploration – Poster session (2D)

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SINTERING COMPOSITE MATERIAL FOR ISRU AND ISFR APPLICATION IN LUNAR AND
MARS SURFACE

Abstract

The research and development group of the 'Istituto Tecnico Industriale E. Fermi of Fuscaldo (Italy), in cooperation with Italian Space Agency, is developing a powder sintering process to demonstrate the feasibility of manufacturing elements required for civil construction in lunar and martian environment. A dedicated hardware has been developed for testing the chemical process on a NASA parabolic flight. During this flight some samples obtained by use of lunar and martian regolith powder will be sintered. This experimentation will allow to evaluate the feasibility of the process in a reduced gravity environment and so qualifying it, so opening an important road for the future human exploration, where a long and permanent stay on the planet surface is planned.