

THE MONA LISA – LEONARDO PROJECT :
A COMPARISON OF HOMOGENEOUS MALE AND FEMALE TEAMS IN A MARS SIMULATION

J. M. A. Waldie and N.A. Cutler

BAE Systems Australia, 677 Victoria St Abbotsford, VIC, 3067, AUSTRALIA

The success of a long-duration planetary exploration, such as a manned Mars mission will be highly dependent on the crew performance. The performance of the crew depends on more than just the technical expertise of each individual. Psychological factors must be considered. Confinement, isolation and group dynamics are just some of the issues that can affect individual and crew performance. The importance of crew composition is gaining recognition within the space community, and one area in which there is very limited data is the question of optimum crew gender composition. In particular, there is scant data on the performance of all-female crews in isolation and confinement. The Mona Lisa – Leonardo Project was conceived at the International Space University (ISU) Summer Session Program 2004 in Adelaide, Australia. The objective was to compare the performance of a homogeneous male crew and a homogeneous female crew under the simulated conditions of a Mars mission. The crews each spent two weeks in isolation at the Mars Society ‘Mars Desert Research Station’ (MDRS) in Utah, USA in April-May 2005. Crews were presented with a series of research projects, and conducted themselves ‘in simulation’ of a Mars landing. A series of psychological, neurocognitive, and physical tests was administered during the rotation to compare crew performance. While full results are not yet available, preliminary findings are summarised in this presentation.

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