



ESA Preparation for Human Lunar Exploration

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The renewed international attention on human and robotic lunar exploration represents an opportunity for Europe to build on its technological heritage and to take a strategic role in the overall international space exploration endeavor. In support of this, a range of activities are being conducted in Europe that address several key capabilities required for human exploration and that prepare for a European participation in a wider lunar exploration programme. The areas covered include in particular those fields in which Europe already has strong technological experience; i.e. habitation and life support systems, crew aspects, crew transportation and robotics. In addition to this, other generic technologies in which Europe might seek to take a strategic role in the future, e.g. In-Situ Resource Utilisation (ISRU) and fuel cell technology are addressed. This paper outlines the specific activities ESA is undertaking within the ESA Aurora Core Programme in order to prepare for future Human Exploration.