

HUMAN EXPLORATION OF THE SOLAR SYSTEM SYMPOSIUM (A5)  
Going Beyond the Earth-Moon System: Human Missions to Mars, Libration Points, and NEO's (4)

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RESULTS OF THE ESA SCENARIO STUDY ON HUMAN SPACEFLIGHT AND EXPLORATION  
PHASE 2

**Abstract**

The ESA Scenario Study on Human Spaceflight and Exploration Phase 2 started in february 2012 for the industry team led by Astrium ST. Several Building Block Elements will be analysed concerning technical performances, cost, risks and usefulness for contribution to international design reference missions, created on the ISECG working group like "Moon First Scenario" or on "NEO First Scenario"

The study will identify useful building block elements and its necessary critical technologies contributed by Europe, resulting in a roadmap for the development of critical technologies. To contribute useful European BBE to the international reference scenario after 2020, the development of needed critical technologies should start soon.

This paper will present the study findings of the industry team, which will complete the study mid of the year.