From Earth Missions to Deep Space Exploration (05)
Cis-Lunar Outposts and other Exploration Missions (5)

Author: Mrs. Erica Hampton
Zero Point Frontiers Corp., United States

Ms. Keithe Baggett
Zero Point Frontiers Corp., United States
Ms. Karin Feldman
Zero Point Frontiers Corp., United States

AN EVALUATION OF THE GLOBAL EXPLORATION ROADMAP (GER) USING AN ESTABLISHED FRAMEWORK BASED ON HISTORICAL EXPLORATION ROADMAPS, INITIATIVES, AND SYSTEMS

Abstract

At key points in space exploration history, roadmaps have been used for planning the major elements required for humanity's next steps into the cosmos. This idea is being revisited in 2011 as the nation enters the post-Space Shuttle era, sees the end of the Constellation Program, and addresses the future of human spaceflight.

This paper will evaluate the International Space Exploration Coordination Group's (ISECG) Global Exploration Roadmap (GER), which was released in September 2011. At today's key point in space exploration history, the GER is the latest roadmap to address the future of human space exploration. It outlines international efforts for sustainable exploration to the moon, near-Earth asteroids, and Mars for the next 25 years.

The evaluation of the GER will be done using a framework developed by Zero Point Frontiers Corp. through previous research into historical space exploration roadmaps and analysis of past, current and future exploration initiatives and systems. The framework has been used to assess the policies, research and development, technologies, funding and support of a roadmap's era. The evaluation determines how those factors impact a plan's development and focus on technologies and other key, roadmap-specific factors. Other space exploration roadmaps that have been evaluated previously using this framework are NASA's Roadmap for Solar System Exploration (1970-1990) and Rockwell's Integrated Space Plan (ISP) (1989-2100). Both plans were generated at dynamic points in U.S. space exploration history: the first developed in the midst of a successful Apollo lunar landing program, and the second during the first decade of the Space Shuttle program. The GER continues this approach, providing an overview of the post-Shuttle era of US Human spaceflight.