Paper ID: 12359
oral

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

Author: Mrs. Emma Lehnhardt
Bryce Space and Technology, United States

COST AND SCHEDULE ESTIMATES AT NASA: OVERVIEW AND IMPLICATIONS FOR FUTURE MISSIONS

Abstract

NASA's cost estimation and program management (particularly relating to achieving cost and schedule targets for major projects) have been criticized by Congress and other entities. Multiple past studies have investigated the root causes of these issues and provided recommendations. In recent years, NASA has implemented several changes to both cost estimation and project management. The impact of these changes is not clear. For example, in 2011, two science projects were launched within cost and schedule targets, perhaps as a result of those managerial improvements. However, also in 2011, the James Webb Space Telescope was approved for an adjusted cost and schedule plan reflecting 140 percent development cost growth.

This paper will detail the changes NASA has made in cost estimation and program management and seek to provide insight into the results of these changes. We will describe the evolution of NASA's cost estimation policies, concluding with an examination of the Joint Confidence Level policy established in 2009. We will characterize the accuracy of cost estimates in recent years, showing cost and schedule performance, compared to estimates, of major NASA programs, and will seek to identify trends.