

INDIAN INTERPLANETARY MISSIONS - A TECHNOLOGY PERSPECTIVE

A.S. Kiran Kumar
Chairman
Indian Space Organisation (ISRO)
Department of Space, Bengaluru-560 094, India
Email : chairman@isro.gov.in

Abstract

The successful insertion of the Indian Mars Orbiter Mission in September 2014 in its maiden attempt along with the preceding Chandrayaan-1 mission has provided a huge boost to the global perception of Indias technological prowess. This technological achievement is built upon the decades of ISRO's experience in mission design, launch and operation of earth observation and communication spacecraft. The main driving factors for the Indian efforts in the direction of lunar and interplanetary missions were the optimal utilization of an existing launch system (PSLV) to achieve minimum energy orbit placement around the Moon and Mars with an innovative, highly elliptic orbit. An exposition of the mission planning, payload design, strategy and the technological features along with the differences with respect to the earth-orbiting missions is presented.

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