



Destination Moon: India's Quest for the Moon, Mars and Beyond. Pallav Bagla and Subhadra Menon. HarperCollins Publishers, A-53, Sector 57, Noida. 2008. 194 pp. Price: Rs 195.

The Moon mission Chandrayaan-1 is the most debated and watched scientific endeavour undertaken by India in recent times. Starting from the inception the subject of sending a capsule to explore the moon using Indian Launch Vehicle developed by the Indian Space Research Organisation (ISRO) has created enormous interest both in India and abroad. In fact the Indian Moon mission has evoked more widespread response across the globe than similar missions from any other country. The impact of the successful launch of the capsule on 22 October 2008 has helped to overcome some of the hardships faced by the general public in the country due to the recent economic meltdown as well as the terrorist attacks.

As common with any other challenging and expensive scientific missions, Chandrayaan-1 also created most animated debates across the country about its necessity. While there was widespread support from all sections of the Indian society, there was also serious opposition from some of the prominent people in the Academia. The opposition was mainly based on the need for undertaking such an expensive endeavour with no known immediate financial or scientific benefits while there is so much of poverty in the country. The strong argument was that reaching the Moon has already been accomplished by Americans and Russians and by sending the moon probe we may not gain any additional insight into

the Moon and we will be just aping the Western world. Fortunately, in spite of such an opposition ISRO went ahead to successfully complete the mission. In my opinion, this is one of the major milestones in the path of India becoming a developed country and the interest created by the media on Chandrayaan-1 also created enough confidence in peoples mind on our scientific and technological abilities. In fact during my frequent visits to countryside it was amazing to see the common man even at the village level talking about the Moon mission.

I am one of the strong supporters of the mission to Moon and in my view, if anything, the mission is late by about five years and we should have been preparing to send the man to space by now and then to Moon in near future. The most important point which emerged from the opinions expressed by various people is that the scientific community needs to look at all these ventures in terms of economic gains and we will not have the luxury of doing science for just the knowledge and our enjoyment. Hence I feel that ISRO must try to answer the question of what will you do after reaching the Moon or Mars. In order to find an answer to this question, ISRO must create a branch which only looks at commercial exploitation of extraterrestrial objects while continuing the development of technology to send the man and material to space at cheaper costs. This organization can look into the aspects of developing infrastructure for human settlement on Moon and harvesting the space resources for our future needs.

The book under review is a timely publication by the well-known journalists who have been reporting on all the major programmes of ISRO over a long period of time. Hence they were following the Moon mission from the first announcement by K. Kasturirangan, who was the Chairman of ISRO at that time. In a way they had a ringside view of all the events leading to the government approval of the moon mission and the book exactly reflects this intimate knowledge. Most of our knowledge about the mission comes from the media coverage which generally reports the final stages of the mission. However knowing the origin of the whole programme, when was the decision made to undertake the mission, what are the factors which led to this decision, what stage of ISRO's achieve-

ments gave confidence to take up such a programme and how was it linked to countries' financial situation and, most importantly, what was the political will needed to make such a decision is equally important and interesting. The book provides such an insight by graphical narration of the steps taken by ISRO through different stages to gain public support to the idea and ultimately convince the government to approve the mission. The Forewords by Kasturirangan and G. Madhavan Nair add value to the book. The book consisting of five chapters covers the aspects of the origin of Moon, its importance for future space programmes, the position of Moon in Indian Ethos, summary of previous missions to Moon, the preparedness of Indian space scientists to undertake such a mission, description of Chandrayaan and the future of Indian deep space explorations. The interviews presented at the end of the book with ISRO Chairman and the Chinese and American counterparts also reveal many details of the mindset for undertaking such moon missions as well as what is the future course of action for such missions. The importance of international collaboration to undertake such scientifically challenging and expensive missions is stressed by all three experts.

In my view the book makes a great contribution towards bringing the behind the scenes story of not only Chandrayaan-1 but also of the functioning of ISRO and its decision-making process. This helps greatly in creating public appreciation of the space research programmes of ISRO. The book also documents all the processes needed to follow before undertaking such mission of national importance. Although the authors have made an attempt to look into the economic aspects of such a mission, the moon exploratory mission at this stage should not be weighed in terms of the financial returns. The book is moderately priced and is a valuable addition to the literature on Indian space programmes. I would like to congratulate the authors as well as the publishers for such a wonderful contribution.

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