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## Task Force Recommends Indian Moon Mission

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NEW DELHI, India — India could launch an unmanned probe to the moon five years after such a mission is approved by the government, a task force established by the Indian Space Research Organisation (ISRO) has concluded.

The polar-orbiting mission could be the first in a wider program of lunar exploration being considered by government authorities here.

“The initial mission will be purely scientific to know more about the moon,” George Joseph, chairman of the task force, said in a telephone interview July 8.

He added that one of the ultimate goals of lunar exploration

is to gather helium-3 and bring it back to Earth. Scientists believe helium-3, an isotope that is scarce on Earth, could potentially be used to generate energy through nuclear fusion.

Joseph said the report of his committee soon will be submitted to the government. He said he did not anticipate any problem in getting the project approved.

Indian space officials expect to get word by December on whether the mission has been approved. If the mission is approved, development funding would be contained in the Indi-

an budget to be released in February.

India’s proposed moon mission has received the endorsement of the Standing Parliamentary Committee on Science and Technology, which reviews the performance of scientific agencies, including ISRO, and makes recommendations to the government.

In its April 2001 meeting, the committee said, “having reached a plateau in terms of technological development, it was time for India’s space program to consider exploring new horizons — the mission to the moon

being one.” The remarks were published April 21 in the 91st report of the Standing Parliamentary Committee on Science and Technology.

The lunar exploration task force, consisting of some 20 experts from within and outside ISRO, was set up by ISRO chairman Krishnaswami Kasturirangan in 2000 after the scientific community voiced widespread support for a moon mission. Joseph, former director of India’s Space Applications Center in Ahmedabad was made chairman.

The task force was tasked to prepare the mission plan, work out cost estimates, and suggest scientific experiments — taking into account the technical resources available within and outside ISRO. The group also will identify areas where international collaboration would be needed, Kasturirangan told *Space News*.

Joseph said the task force has not worked out the exact cost of the mission, but estimated it would be around 3.5 billion Indian rupees (\$74 million).

Scientists envision initially sending a 100-kilogram, polar-orbiting spacecraft to conduct studies of the moon’s surface. According to the task force, the mission could be launched by

India’s existing Polar Satellite Launch Vehicle, which is designed to put satellites into low Earth orbit.

Asked if ISRO would be repeating experiments done by the United States and former Soviet Union, Joseph said: “Wait until we submit the report. We have some original ideas.”

India’s proposed moon mission is not a bid to gain international prestige, Joseph said. “We are embarking on a scientific mission,” he said. “For instance the issue of whether there is water on the moon is still unresolved. Definitely there will be technology spinoffs. There is lot of excitement in the scientific community.”

In a recent interview with the *Hindustan Times*, Kasturirangan said India would carry out lunar exploration in a step-by-step manner, going from orbiters to landers, and then to sample-return craft.

According to the report of the Standing Parliamentary Committee on Science and Technology, the Vikram Sarabhai Space Centre in Thiruvananthapuram, India, which build’s launch systems, has been tasked with developing space recovery vehicles.

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— George Joseph

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