

**GOVERNMENT OF INDIA
SPACE
LOK SABHA**

UNSTARRED QUESTION NO:3620
ANSWERED ON:18.03.2015
MARS ORBITER MISSION
Khadse Smt. Raksha Nikhil

Will the Minister of SPACE be pleased to state:

- (a) the details of achievements of the Mars Orbiter Mission (MOM) including its planned life span;
- (b) whether Indian Space Research Organisation (ISRO) proposes to extend the planned life span of MOM; and
- (c) if so, the details thereof and the benefits that might accrue as a result thereof?

Answer

MINISTER OF STATE IN THE MINISTRY OF PERSONNEL, PG & PENSIONS AND IN THE PRIME MINISTER'S OFFICE
(DR. JITENDRA SINGH):

a) The planned life span of Mars Orbiter Mission (MOM) after its insertion into Mars orbit on September 24, 2014 is 6 months. The details of significant achievements of MOM include –

- i. First interplanetary mission realized by India and first Indian spacecraft to incorporate full scale on-board autonomy to overcome the long distances and the communication gaps due to non-visibility periods.
- ii. First Indian spacecraft to successfully survive Van Allen belt crossing 39 times.
- iii. First mission to use Ship Borne Terminals to track the launch vehicle and satellite over Pacific Ocean by ISRO.
- iv. First Indian spacecraft to escape the Sphere Of Influence of Earth and orbit Sun.
- v. First Mars mission in the world to succeed Mars Orbit Insertion in first attempt.
- vi. Most economical interplanetary mission in the world and paved way for cost- effective access to deep space. The launch vehicle, Spacecraft and Ground Segment have been realised with a budget of Rs 450 Cr.

b)&c) The planned life span (6 months) of MOM is completing on March 24, 2015. One of the life limiting parameters of a spacecraft, under nominal orbital conditions, is the availability of propellant to maintain its orbit and orientation. In case of MOM, a reserve of 37 kg of propellant is available in the satellite. Since the health parameters of all critical systems of the satellite are very satisfactory, it is expected that MOM will outlive its planned life span of 6 months. The increased duration of observation of Mars by five scientific payloads will enhance the planetary science data. It would also enable coverage of Mars in different seasons.