

Chandrayaan-3 Makes A Perfect **Touchdown**, **Uplifts** Spirits Of A Billion, Heralds Arrival Of A New **Lunar Power**

India Goes Where No Nation's Gone Before

Pole Position: Is First To Land In Southern Polar Region Of Moon

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Bengaluru: "To boldly go where no man has gone before..." That was the opening narration in the iconic sci-fi TV series 'Star Trek'. It pretty much summarises the scale of the

The lander and rover will look for traces of water/ice, which may help support long-term lunar and space missions.

The lander, Vikram, representing India's second bid at unravelling mysteries on the unexplored side, made its final descent from a height of 70km in textbook style. "We have achieved soft-landing... India is on the moon... This is the beginning of the golden era," said Isro chairman S Somnath amidst applause from scientists and engineers at the operations centre in Bengaluru.

Vikram has established communication links with the Missions Operations Complex in Bengaluru.

The lander carries within it the rover, Pragyan, which rolled out on to the Moon's surface after midnight. Pragyan is designed to leave an imprint of the national emblem and Isro's logo on the lunar surface. It will roam over a bleak, uncharted terrain in days to come, sending back data and visuals.

India is now the fourth nation to land on Moon and the first to land near its south pole.

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ACE OF SPACE: OUR MOONMENT IN THE SUN

THE LANDING AS IT HAPPENED

5.43pm | Power descent begins with rough braking phase. Vikram lander's velocity at 1,680m/s

Next 11.5 mins | Lander velocity reduced to 358m/sec. Altitude down from 25km to 7.4km

> In next 10secs, it descends to 6.4km

Next 3 mins | Altitude reduced to 800m

> **Vertical descent begins.** Vikram hovers at 149.8m for around 22 seconds. In next 38 seconds, it descends to 10m above lunar surface

> Vikram takes 9 seconds for final descent of 10m

6.03pm | **Touchdown!**



Start of a golden era... No one in the world can do it like we do

ISRO CHAIRPERSON S SOMNATH

AFTER LANDING

Vikram lander deploys its solar panels

At midnight, process of rover's rollout began

Health of instruments on the lander and rover to be checked

Rover's movement on Moon surface to begin

Lander and rover to start sending data



OVER THE MOON

CHANDRAYAAN-1

Launch Date | October 2008

Payload | An orbiter and a Moon impact probe

Result | Successful

CHANDRAYAAN-2

Launch Date | July 22, 2019

Launch Date | September 6, 2019

Payloads | Orbiter, lander, rover

Result | Orbiter in Moon's orbit, lander crashed minutes before touchdown

CHANDRAYAAN-3

Launch Date | July 14, 2023

Launch Date | August 23, 2023

Payloads | Propulsion module, lander, rover

Status | Lander soft-lands on Moon, process of rover deployment begins



SPACE AUDACITY

On November 21, 1963, a bunch of Indian scientists experimenting on space science in a sleepy fishing village in Trivandrum carried a US-made 75kg Nike Apache — their first rocket to be fired — on a bullock cart. Almost 60 years later, on Wednesday, Isro became the first to soft-land a spacecraft on the south pole of Moon.

IN A NEW ORBIT

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achievement by India's space scientists on Wednesday.

Isro's Chandrayaan-3 made a perfect touchdown in Moon's south polar region at 6.03pm Wednesday, pitchforking India into an elite club of nations that have achieved soft-landing on lunar surface.