

INDIA'S JOURNEY TO MOON 2022-23

ISRO-CHANDRAYAAN

The Indian Space Research Organisation (ISRO) is India's national space agency, founded in 1969. Its Headquarters is in Bangalore. ISRO is responsible for the nation's space exploration and satellite programs. It has developed and launched numerous satellites for communication, weather monitoring and Earth observations.

CHANDRAYAAN-1

Scientists of this mission:

- Dr. G. Madhavan Nair (was the chairman on this time)
 - Dr. Myswamy Annadurai (Project director of Chandrayaan-1)
 - Dr. S. Satish (Director of ISRO public relation for the mission)
- And their team also played vital roles!!!

Overall Discussion in short

- Launch Date: October 22, 2008
- Launch Vehicle: PSLV-C11 (Polar Satellite Launch Vehicle)
- Mission Duration: planned for 2 years. Operated for 312 days.



- Achievements:**
 - Provided high-resolution 3D maps of lunar surfaces.
 - Detected the presence of Magnesium, Aluminium, Silicon, Titanium and other elements on Moon.
- End of Mission:** Communication was lost on August 29, 2009.
- Significance:** Marked India's entry into Lunar exploration and contributed valuable scientific data to Global Lunar Studies.

Rahul Chakhalaya

Introduction

Chandrayaan-1 was India's first lunar probe, launched by ISRO. The mission was successful in confirming the presence of water/hydroxyl on Moon.



CHANDRAYAAN-2

Introduction

Chandrayaan-2, was India's 2nd Lunar probe, aimed to explore the Moon's South polar region. It consisted of an orbiter, a lander named VIKRAM,

and a rover named PRAGIYAN.



Overall Discussion

Launch Date: July 22, 2019.

- Launch Vehicle: GSLV Mk III-M1.
- Mission Components:
 - Orbiter: Designed to orbit the Moon and conduct remote sensing observations.
 - Vikram Lander: Intended to make a soft landing on the lunar surface.
 - Pragyan Rover: Planned to explore the lunar surface after landing.



Pragyan Rover: Planned to explore the lunar surface after landing.

Primary Objective:

To map and study variations in lunar surface composition, locate and study the lunar water, ice and analyze the lunar exosphere.

Challenges:

The Vikram lander lost communication with the mission control during its descent on September 6, 2019, just 2.1 km above the lunar surface.

Scientists

Dr. K. Sivan

Dr. Myswamy Annadurai

Dr. S. Somnath

Dr. V. Narayanan

along with their team

Achievements:

- The orbiter continues to function and sends valuable scientific data from its lunar orbit.
- Provide high-resolution image of moon.

Purva Chatterjee

CHANDRAYAAN-3

Introduction

Chandrayaan-3, is India's third lunar exploration mission by ISRO. The mission aims to demonstrate a successful soft landing on the Moon's surface and deploy a rover to explore the lunar terrain.



Overall Discussion:

Launch Date: July 14, 2023.



- Mission Components:
 - Lander (Vikram) responsible for soft landing & carrying scientific instruments.
 - Rover (Pragyan)

A six-wheeled vehicle designed to explore the lunar terrain and conduct experiments.

Propulsion Module: Used to carry lander and rover from earth to lunar orbit and payload to study the Earth's spectroscopic and polarimetric data from lunar orbit.

Mission Duration

It's designed to be one lunar day, which is approximately 14 earth days. This is the expected operation period for the rover on the Moon surface.

Nilesh Majumdar

Scientists

Dr. K. Sivan (Chairman of ISRO during this mission)

Dr. S. Somnath (Director of Vikram Sarabhai Space Centre)

Dr. M. Annadurai (Director of URSC along with their team)