

# Pragyan Rover

Pragyan rover of Chandrayaan -3

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# Important Topics

of Pragyan Rover

1

Major Prats

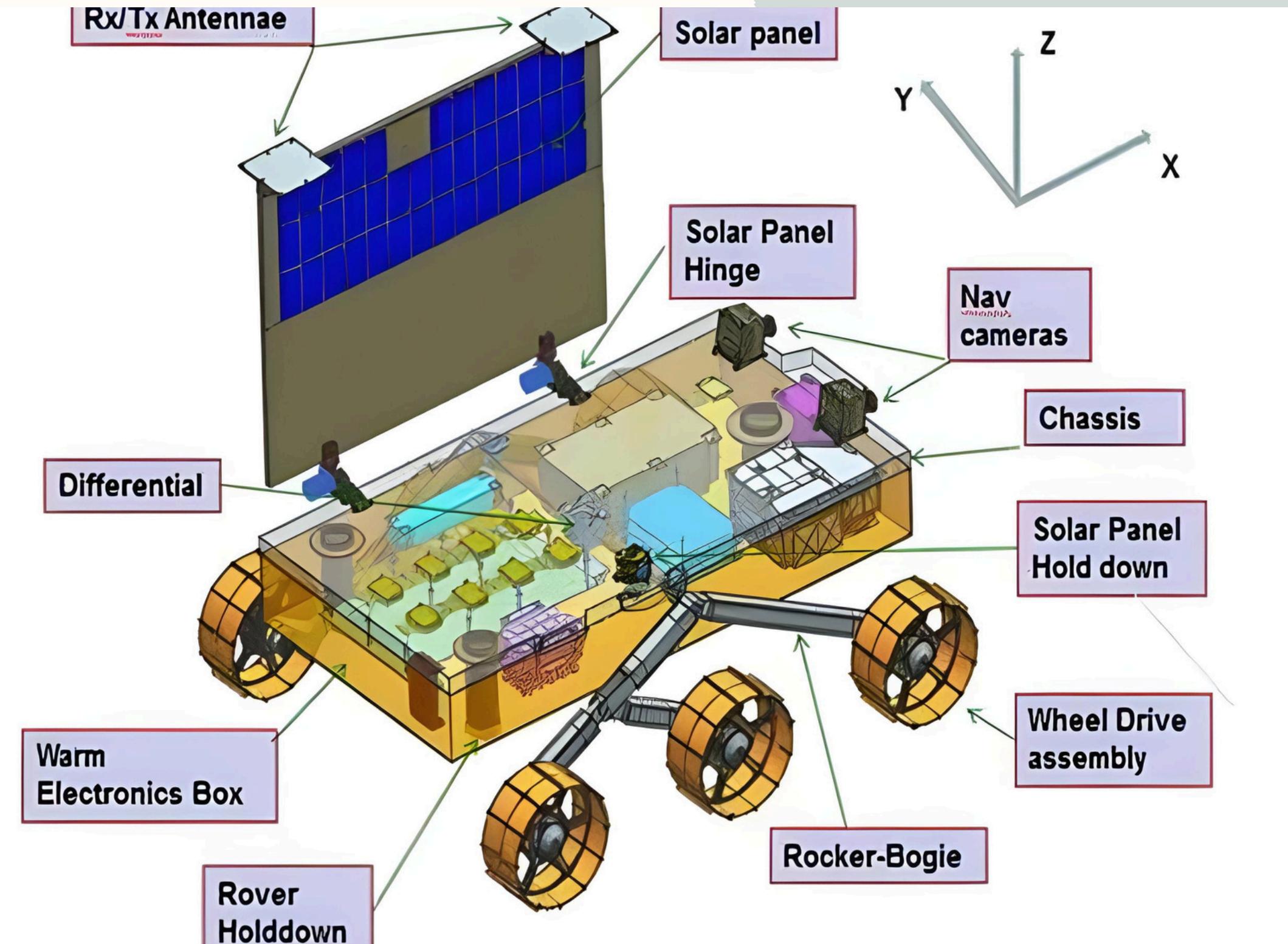
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The Functions of Parts

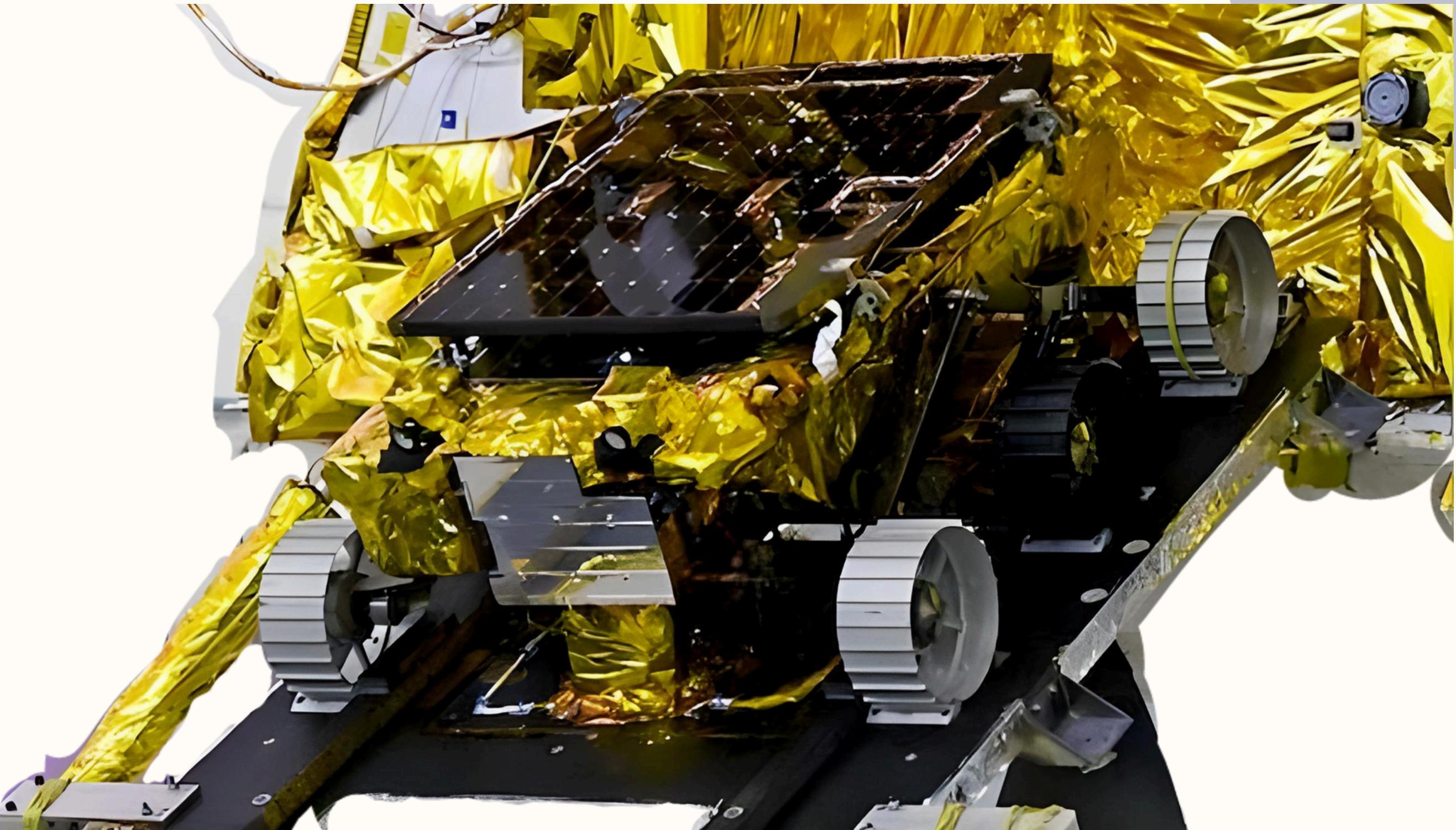
3

Parts used in this Project

# Major Parts

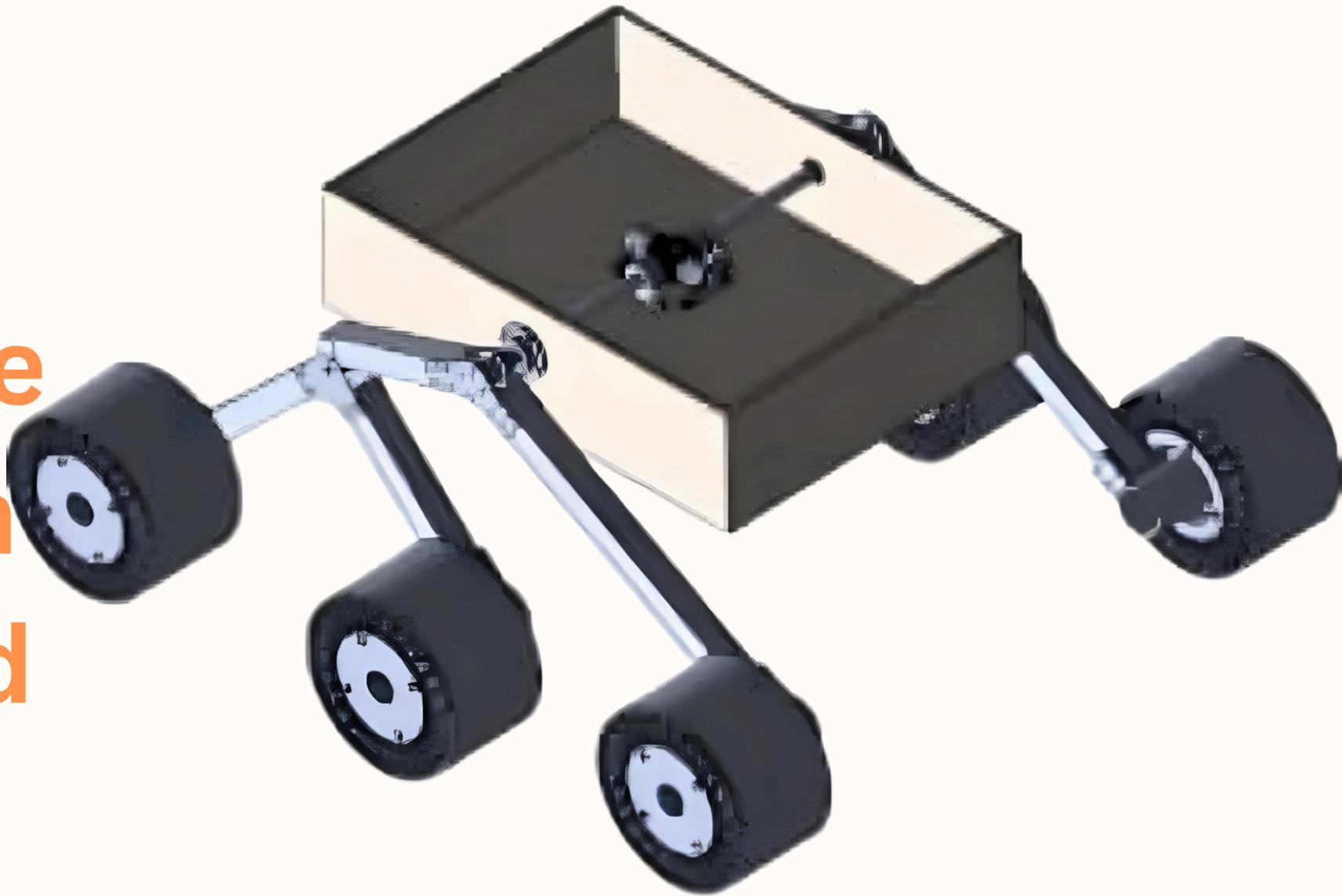


# Chasis



# Overview about Chassis

The Pragyan rover is part of India's Chandrayaan 3 mission, which aims to explore the Moon's surface. Here's an overview of its main parts and functions

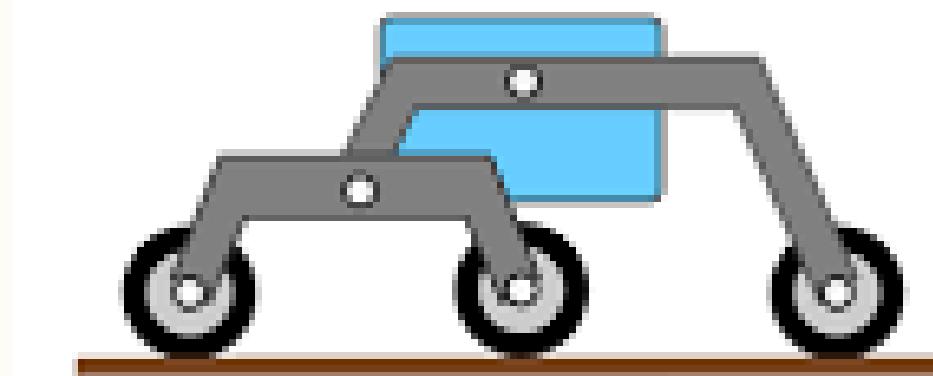


# Wheels and Mobility System

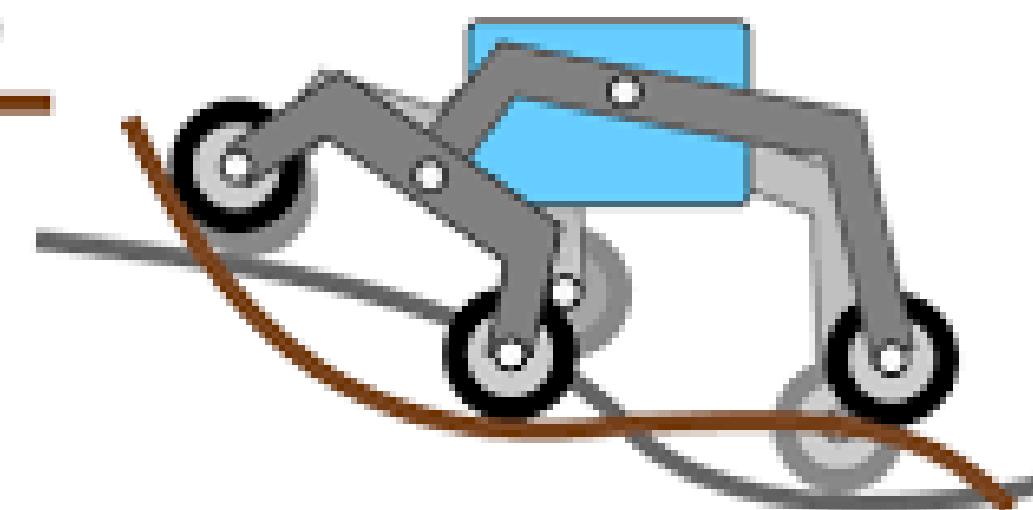
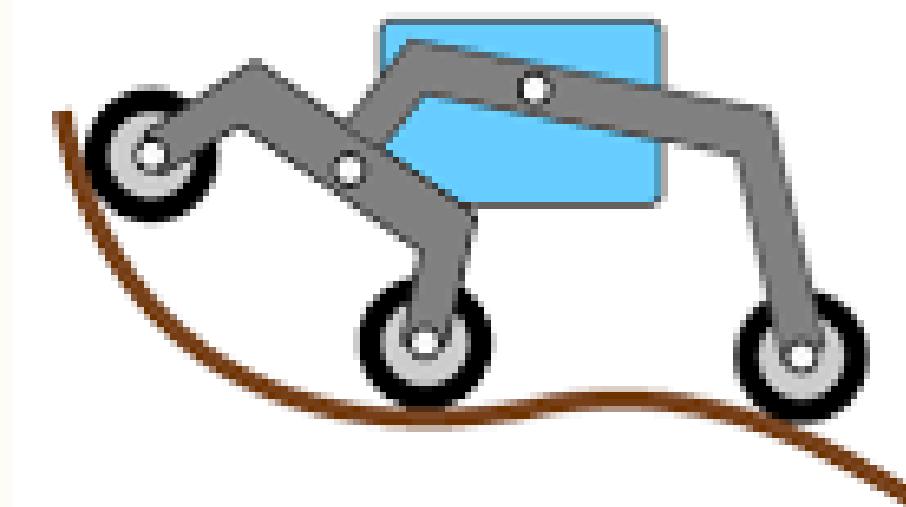


# Overview of Wheels and Mobility System

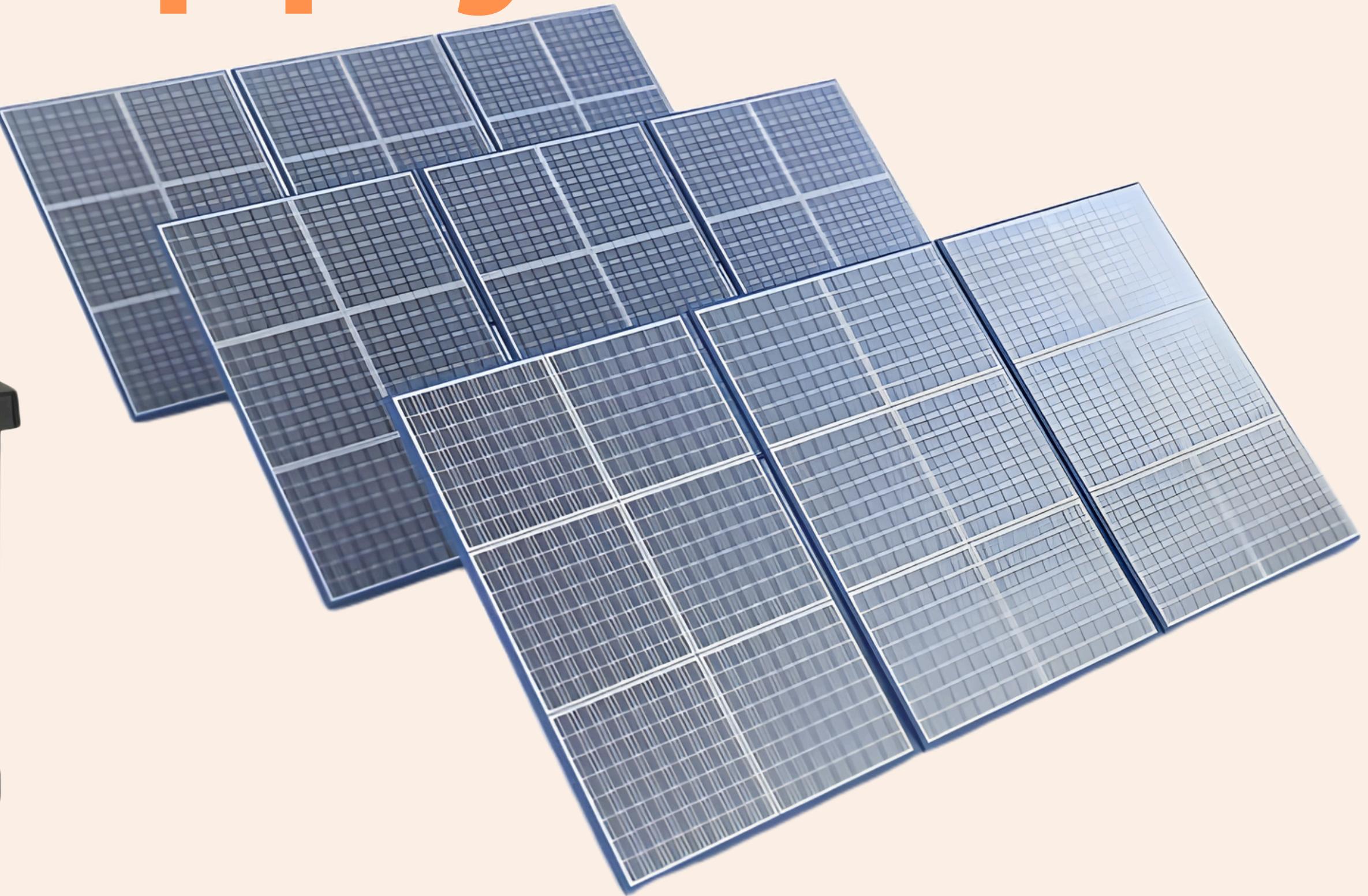
**Wheels and Mobility System:** Pragyan has six wheels designed to traverse the lunar terrain. The wheels are equipped with actuators that enable it to navigate various types of lunar surfaces and obstacles



Rocker-Bogie system



# Power Supply



# Overview about Power Supply

**Power Supply:** The rover is powered by solar panels that charge its batteries. These batteries provide energy for its operations when the solar panels cannot generate power such as during the lunar night



# Scientific Instruments



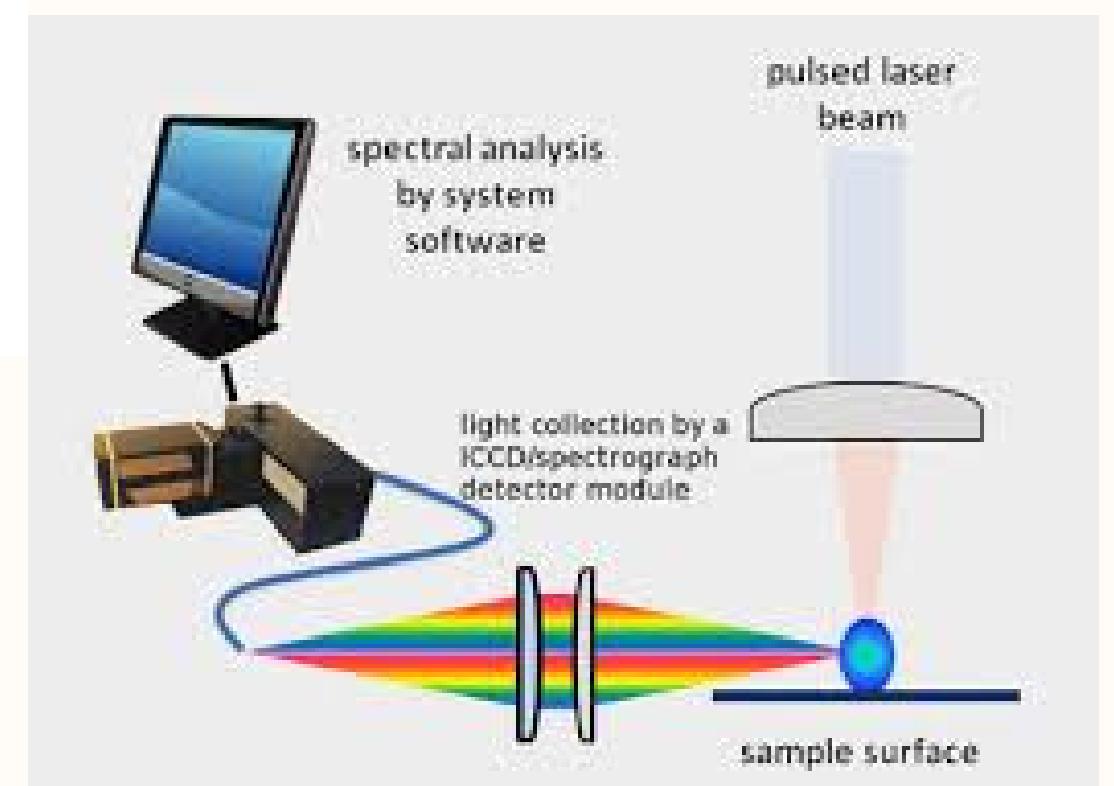
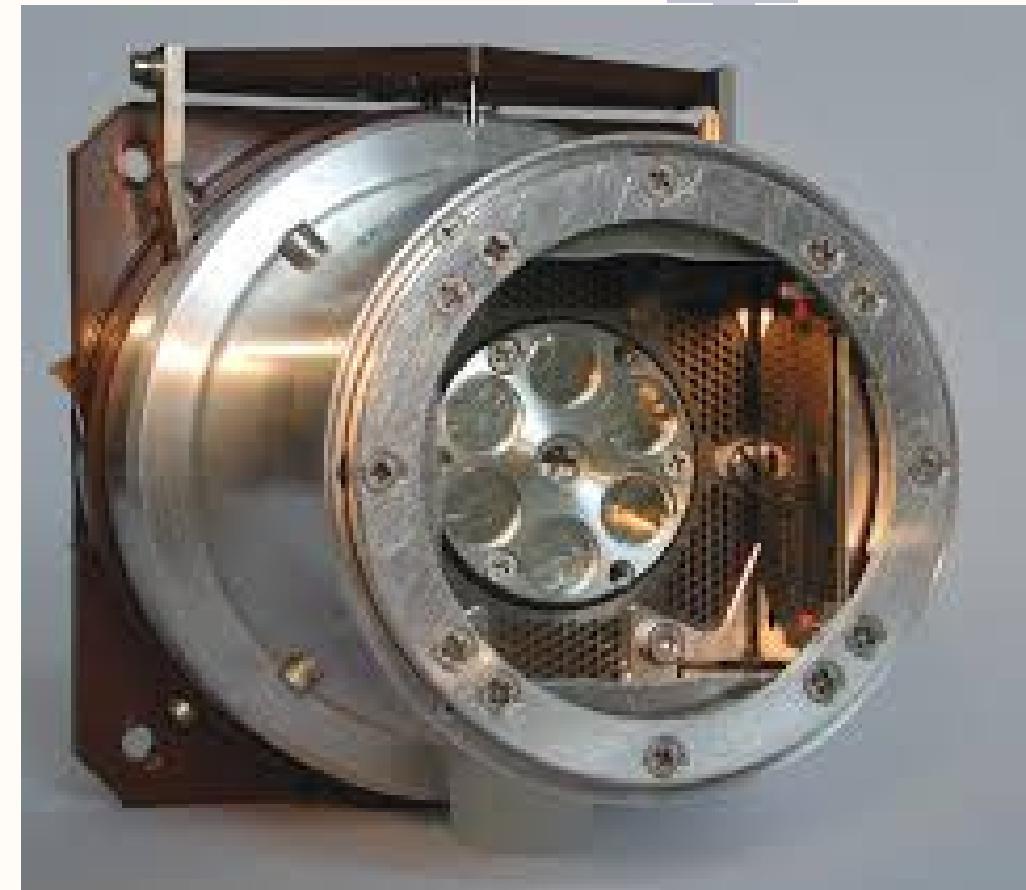
# Overview about Scientific Instruments

**Alpha Particle X-ray Spectrometer (APXS):** Analyzes the composition of lunar soil and rocks



**Laser-Induced Breakdown Spectroscopy (LIBS):** Determines the elemental composition of the lunar surface.

**Imaging Cameras Used for capturing images and videos of the lunar terrain and assisting in navigation**



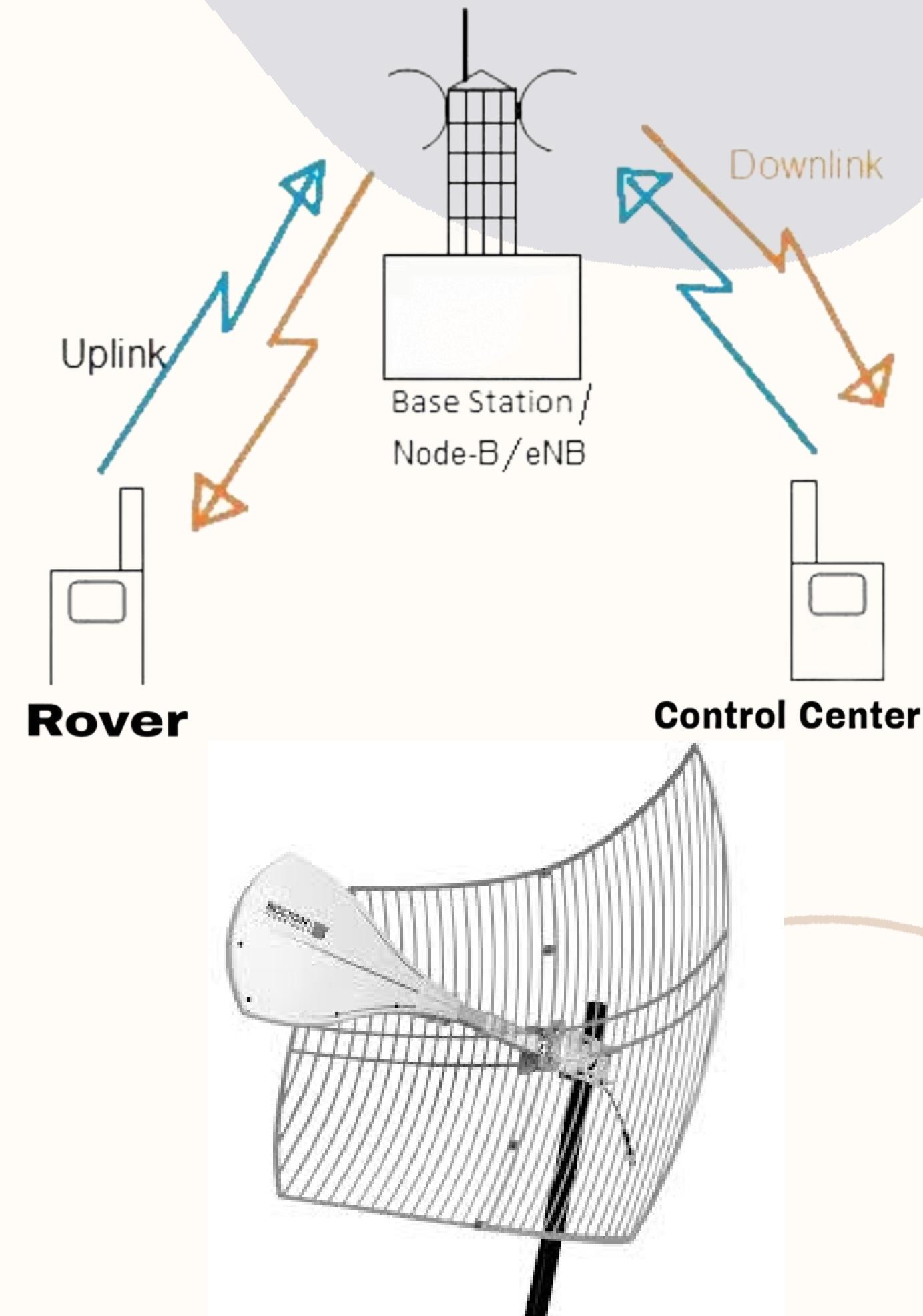
# Communication Devices



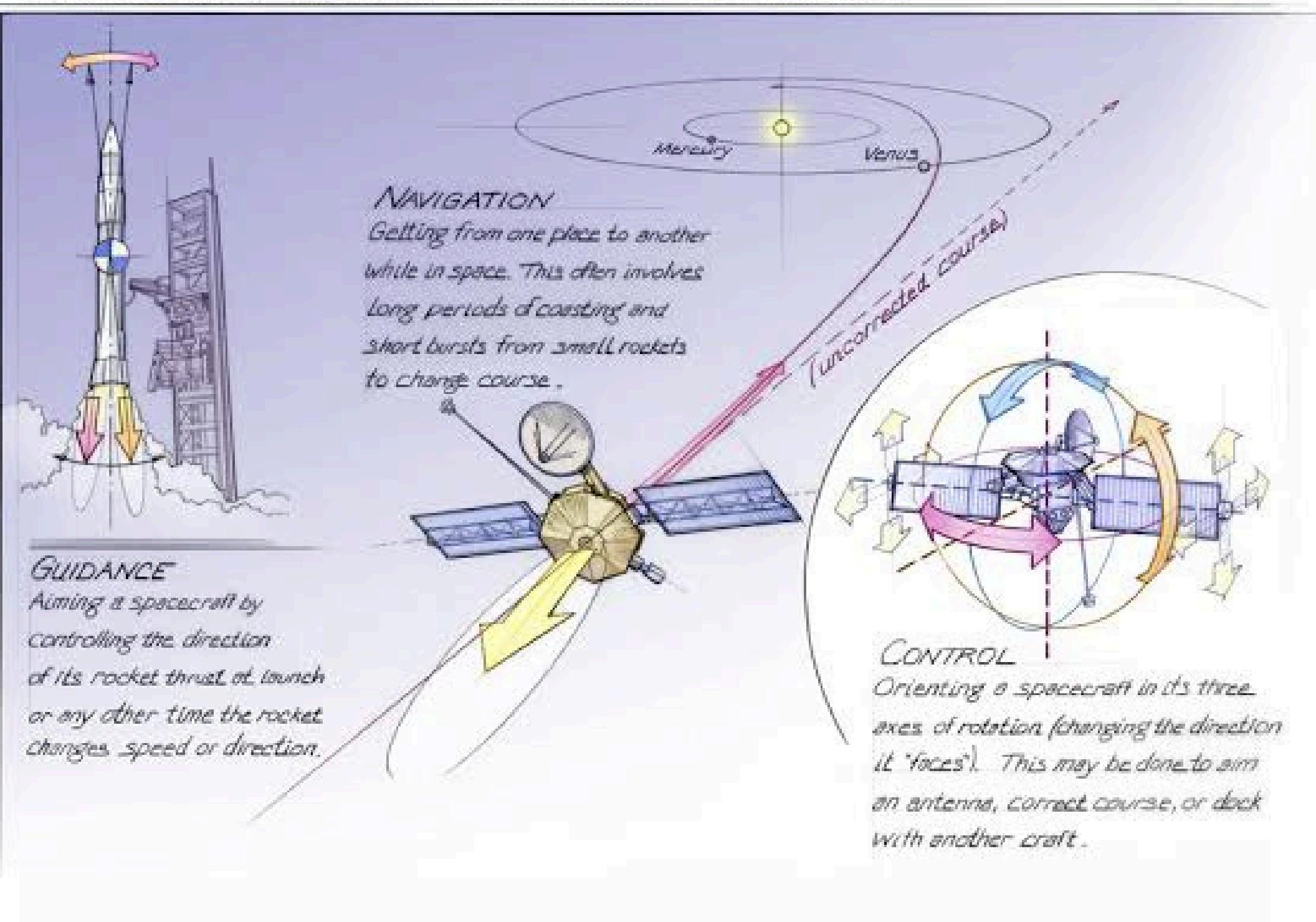
# Overview of Communication Devices

**High Gain Antenna:** Transmits data back to Earth

**Uplink and Downlink Antennas:** Facilitate communication with the lander and the ground control



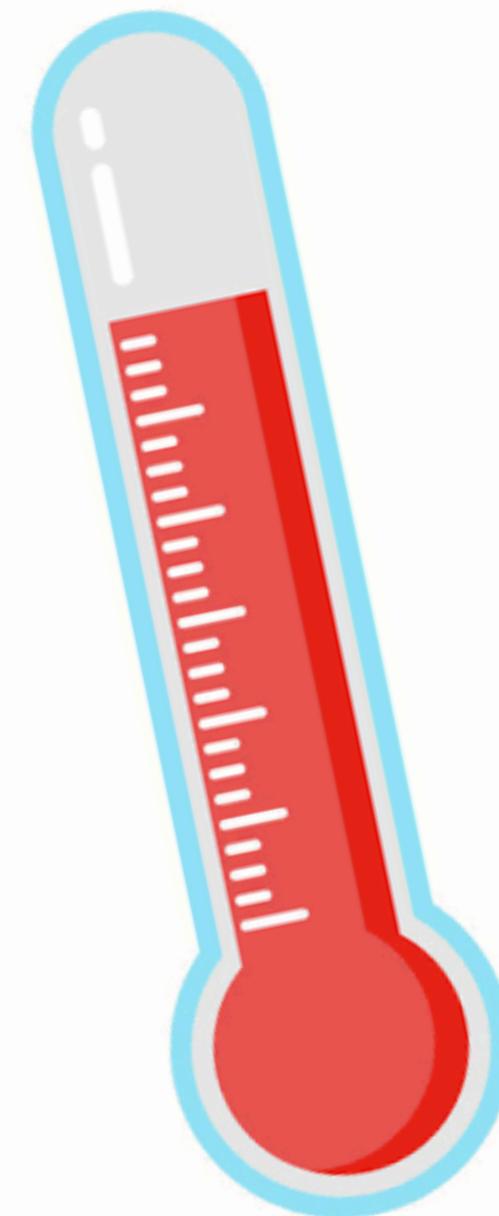
## GUIDANCE, NAVIGATION, AND CONTROL



# About Navigation and Control System

Includes sensors and processors that help the rover determine its position, orientation, and trajectory, ensuring it can navigate autonomously

# Thermal Control System

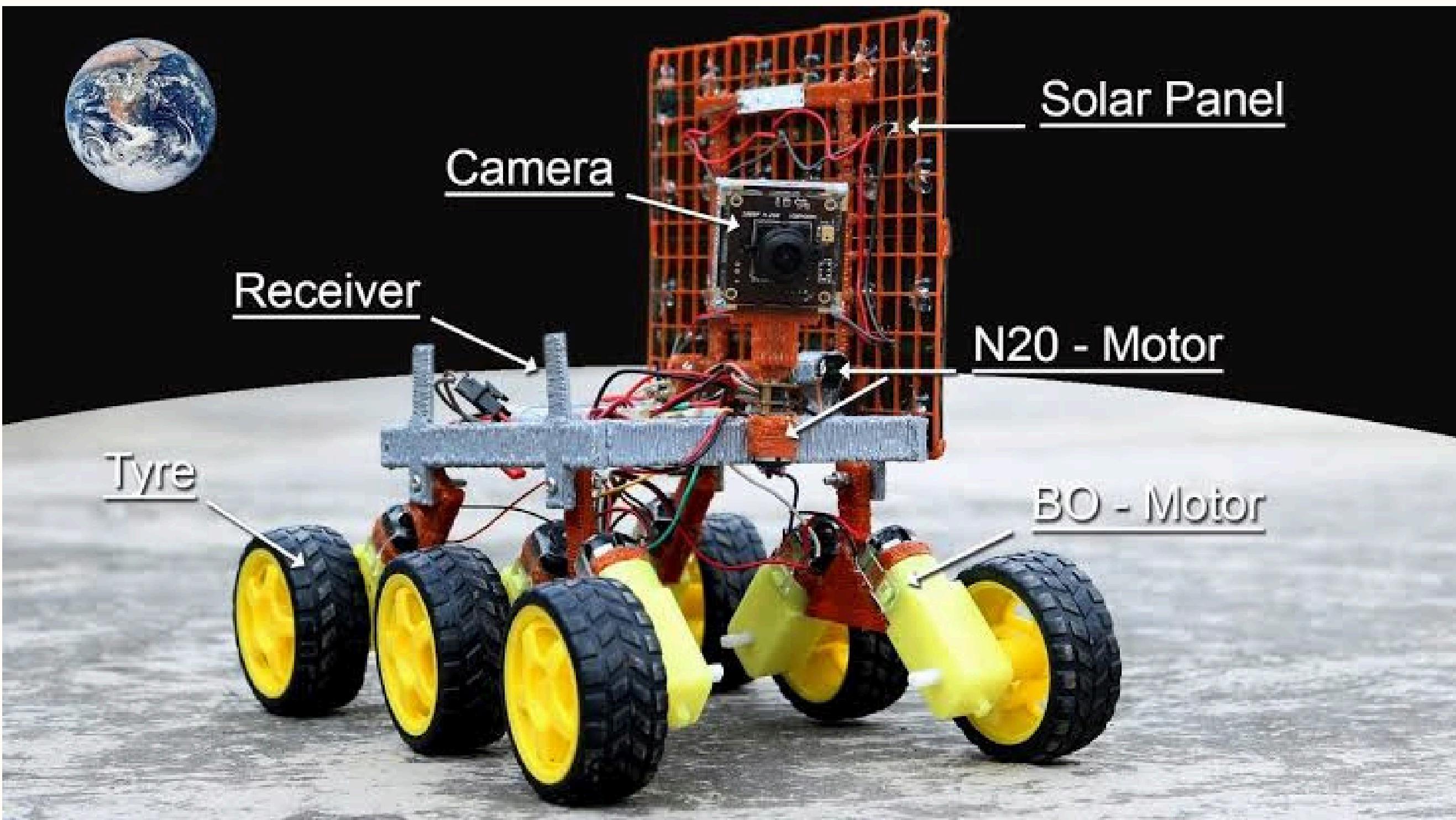


# Thermal Control System

Maintains the rover's temperature within operational limits to ensure the proper functioning of its components in the extreme lunar environment.



# Our Model



# **Components Used**

## **IN THIS MODEL**

- Arduino Board**
- L293D Motor Driver**
- LEDs**
- Battery & Solar Panel**
- Motors & Wheels**
- Bluetooth Module**
- Servo Motors & Jumper Cables**

# Thank you!

Thanks everyone for watching our model and  
presentation