

PLANETARY SCIENCES

BY J.ADITHYA, FARHAN MADAR AND VIJAY BHASKAR

NO.4, KILPAUK GARDEN ROAD, 2ND STREET KILPAUK CHENNAI-600010

J.ADITHYA PH-9840348069

Planetary science, also known as **planetology**, is the **science** of **planets**, or **planetary systems**, and the **solar system**. Planetary science may be considered a part of the **Earth sciences**, as its parent field. Research tends to be done by a combination of **astronomy**, **space exploration** (particularly **robotic spacecraft** missions), and comparative, experimental and **meteorite** work based on Earth. **Astrogeology** and more recently **Astrobiology** are major aspects of planetary sciences. Planetary science, studies objects ranging in size from **micrometeoroids** to **gas giants**, their composition, dynamics and history. The study of planets enable us to understand our position in the solar system and combat problems like global warming and ozone hole depletion. The goal of planetary sciences is to find the situations prevailing in other planets like the composition of the atmosphere, minerals present and whether the planet has the capability to harbour life. The study of micrometeorites and meteors, which were formed along with solar system provide us with insights on how our solar system formed. Micrometeoroids pose a significant threat to space exploration. Their velocities relative to a **spacecraft** in orbit can be on the order of kilometers per second, and resistance to micrometeoroid impact is a significant design challenge for spacecraft and **space suit** designers. This makes it all the more important for research and development in this field. **Astrobiology** deals with the holy grail of space exploration, the quest for life on other planets(complex or other wise).And with the advent of space exploration, we may finally be able to solve the fermi paradox.