

# Psyche mission

June 29, 2022

**In news**– NASA has cancelled its planned 2022 launch attempt of the Psyche **asteroid mission** that was designed to study a metal-rich asteroid.

## **What is the Psyche mission?**

- **Psyche is the name of an asteroid orbiting the Sun between Mars and Jupiter** and the name of a NASA space mission to visit that asteroid.
- Key objectives of the mission are-
  - **To understand how planets and other bodies are separated into layers** such as cores, mantles, and crusts.
  - To **examine an asteroid made of metal.**
  - To explore early eras of the solar system.
- **Psyche was selected in 2017 as part of NASA's Discovery Program**, which is a line of low-cost competition missions led by a single principal investigator.
- **Psyche is the first asteroid known to the world likely made largely of metal rather than rock or ice.**
- It appears to be the exposed nickel-iron core of an early planet, one of the building blocks of our solar system.
- The asteroid Psyche may be able to tell us how Earth's core and the cores of the other terrestrial (rocky) planets came to be.

## **NASA's Discovery program-**

- The Discovery Program is a series of Solar System exploration missions funded by the US National Aeronautics and Space Administration through its Planetary Missions Program Office.

- **The Program was founded in 1990** to implement the policy of the then-NASA administrator Daniel S. Goldin of “faster, better, cheaper” planetary science missions.
- Discovery missions are solicited through a call for proposals on any science topic and assessed through peer review.
- The Program also includes Missions of Opportunity, which fund US participation in spacecraft operated by other space agencies, for example by contributing a single scientific instrument.
- It can also be used to re-purpose an existing NASA spacecraft for a new mission.
- As of June 2021, the most recently selected Discovery missions were VERITAS and DAVINCI+, the fifteenth and sixteenth missions in the program.