



## Asteroid 16 Psyche

---

 [drishtias.com/printpdf/asteroid-16-psyche](https://www.drishtias.com/printpdf/asteroid-16-psyche)

### Why in News

---

A recent study at **National Aeronautics and Space Administration (NASA)** has found out that **asteroid 16 Psyche**, which **orbits between Mars and Jupiter**, could be **made entirely of metal** and is worth an estimated 10,000 quadrillion US dollars.

### Key Points

---

- **About Asteroid 16 Psyche:**
  - Asteroid 16 Psyche is **located 370 million kilometers away from earth** between Mars and Jupiter and has a diameter of 140 miles.
  - It was **discovered in the year 1853** by the Italian astronomer Annibale de Gasparid and was **named after** the ancient Greek goddess of the soul, Psyche.
  - **Unlike most asteroids** that are made up of rocks or ice, scientists believe that Psyche is a **dense and largely metallic object** thought to be the core of an earlier planet that failed formation.
  - Psyche's shape is like a potato which **takes about five earth years to complete one orbit of the sun** but only **a bit over 4 hours to rotate** once on its axis.
- **Latest Findings:**
  - The latest study through the **Hubble Space Telescope** and ultraviolet observation gives a clearer picture of Psyche's composition.  
The Hubble Space Telescope was **launched into low Earth orbit in 1990** and remains in operation.
  - It was found that **Psyche could be a unique asteroid composed of iron and nickel almost completely** which is **similar to earth's core**. The iron alone would be worth more than 10,000 quadrillion US dollars.  
Scientists noted that the manner in which Psyche reflected ultraviolet light was very similar to the way iron reflects sunlight.

- **NASA's Psyche mission:**

- The primary target of the Psyche mission **to be launched in 2022** by NASA is to study this asteroid completely and confirm the assumptions being made by the scientists.
- Psyche mission will be the **first mission to investigate this metallic asteroid**. Psyche spacecraft will **land on the asteroid in early 2026**.
- As the composition of Psyche is very similar to earth's own core, its study will also **give an insight to earth's violent history** of collisions and accretion that created it.

**Source: IE**