

# Asteroid 16 Psyche

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## In New

- 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.

## About 16 Psyche Asteroid

- It orbits between Mars and Jupiter.
- 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 in formation.
- The NASA scientists believe that the asteroid is made up of almost entirely of iron, nickel and several other rare materials like gold, platinum, cobalt, iridium and rhenium.
- It is one of the most massive objects in the asteroid belt in our solar system.
- It is a potato-shaped asteroid which has a diameter of around 140 miles.
- It was first discovered on March 17, 1853, by the Italian astronomer Annibale de Gasparis.
- It was named after the ancient Greek goddess of the soul, Psyche.
- Metal asteroids are not commonly found in the solar system, and scientists believe that studying 16 Psyche may offer a rare glimpse of what the inside of a planet really looks like.

## 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.

### **Hubble Space Telescope**

- Launched: 1990
- NASA named the world's first space-based optical telescope after American astronomer Edwin P. Hubble (1889-1953).
- Dr. Hubble confirmed an "expanding" universe, which provided the foundation for the big-bang theory.
- The Hubble is the first major optical telescope to be placed in space, the ultimate mountaintop.
- Above the distortion of the atmosphere, far far above rain clouds and light pollution, Hubble has an unobstructed view of the universe.
- Scientists have used Hubble to observe the most distant

stars and galaxies as well as the planets in our solar system.