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**News:** Psyche mission

- NASA's Psyche spacecraft, currently journeying over 16 million kilometers away in space, recently achieved a groundbreaking feat by successfully firing a laser signal at Earth.

## **Psyche Mission**

- The primary target of the Psyche mission to be launched in 2022 by NASA in collaboration with SpaceX is to study the Asteroid 16 Psyche 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.

### **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.
- Psyche is a rare metallic asteroid believed to be the exposed nickel-iron core of an early planet.

- It was discovered in the year 1853 by the Italian astronomer Annibale de Gaspari 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.**
- The latest study through the **Hubble Space Telescope and ultraviolet observation gives a clearer picture of Psyche's composition.**
- It was found that Psyche could be a **unique asteroid composed of iron and nickel almost completely which is like earth's core.**
- The iron alone would be worth more than 10,000 quadrillion US dollars.
- Scientists noted that the way Psyche reflected ultraviolet light was very similar to the way iron reflects sunlight.