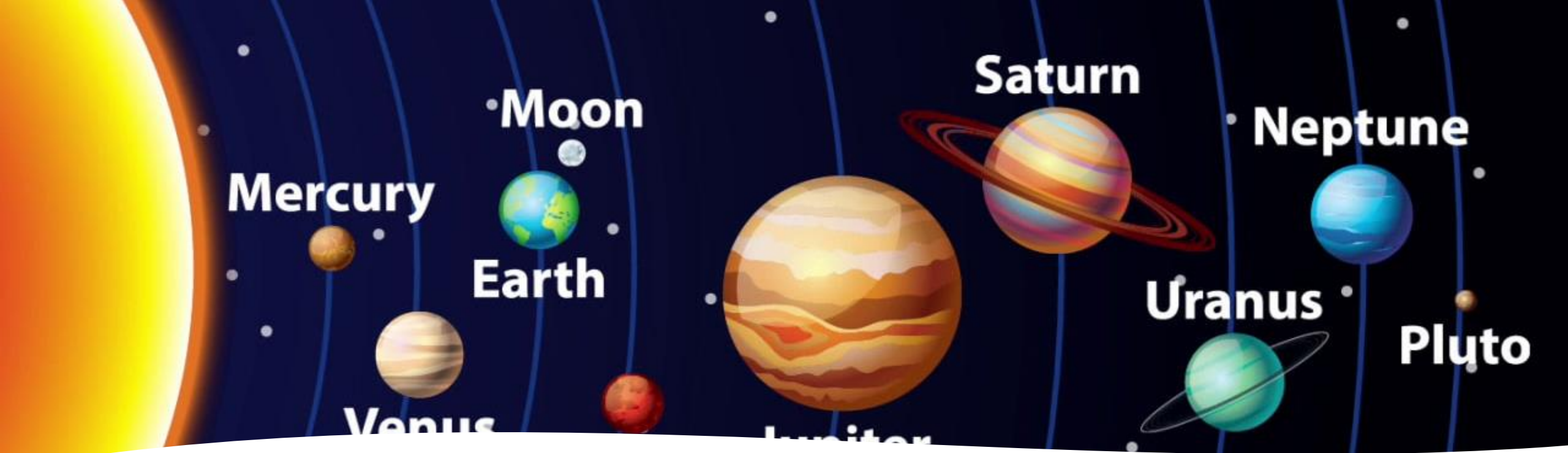


A digital illustration of the planet Saturn, showing its characteristic rings. The planet is a dark, brownish-gold color, and the rings are a lighter, dusty brown. A bright light source, likely the Sun, is positioned behind the planet, creating a lens flare effect and illuminating the rings from behind. The background is a dark, starry space with a subtle nebula-like glow.

Saturn

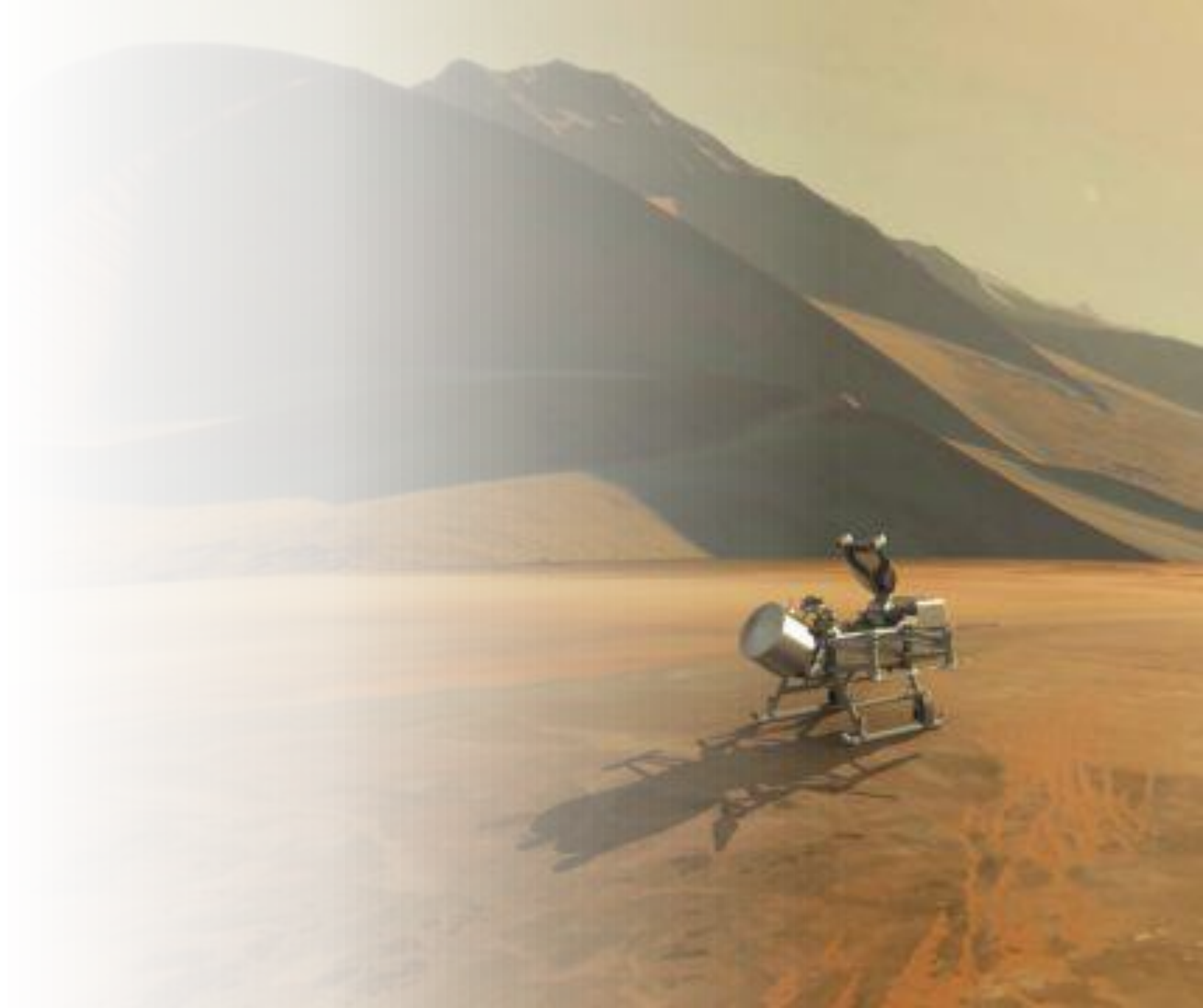


What is Saturn?

- Saturn is the sixth planet from the Sun and named after the Roman god Saturnus but however equivalent to the Greek god Kronos. Many people think that Saturn is the most beautiful world in the Solar System.
- Saturn is about 4.5 billion years old.

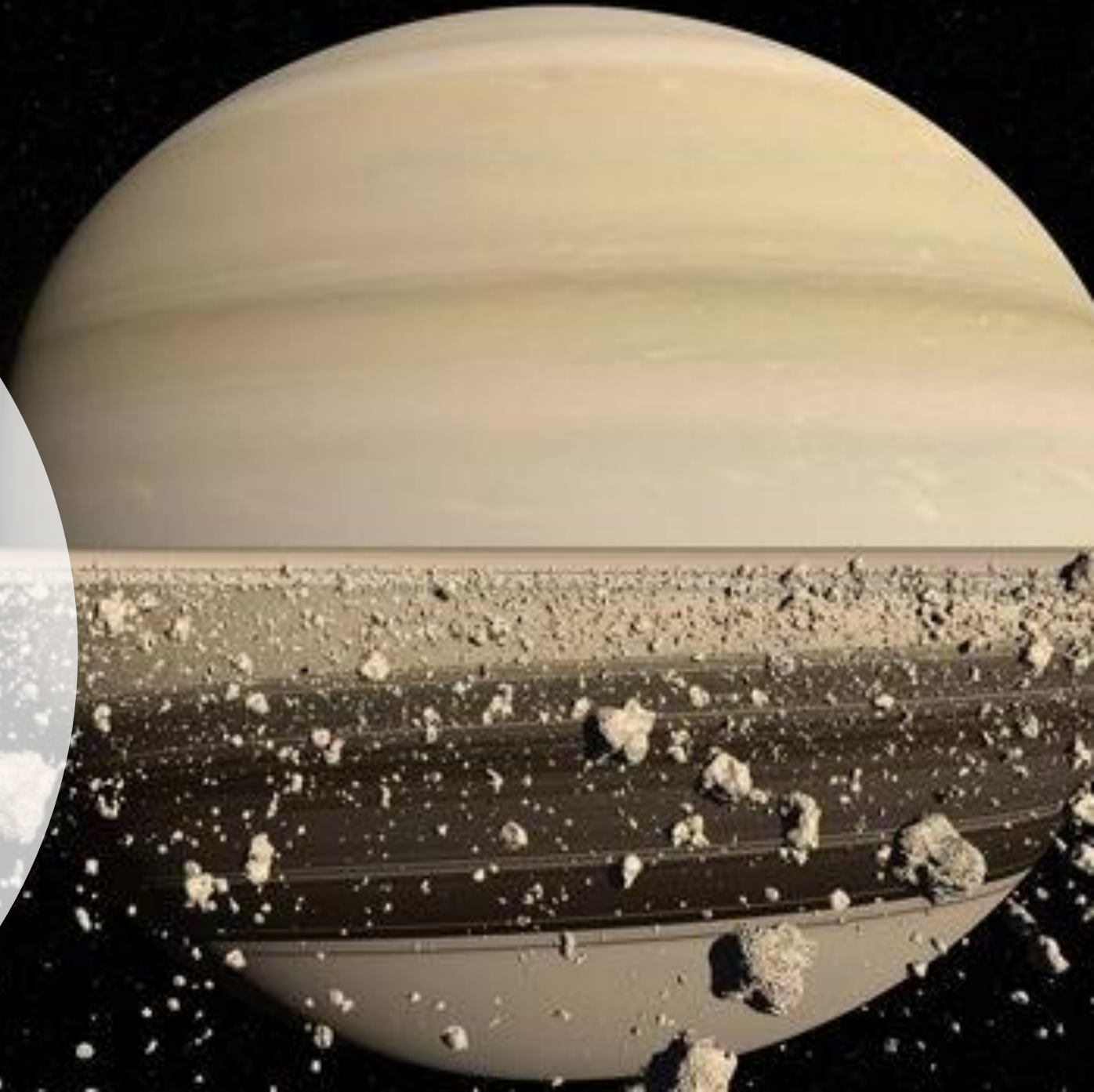
Can you land on Saturn?

- Most people ask whether you can land on Saturn like you can on the moon. The answer is no because Saturn is a "gas giant." So therefore, Saturn doesn't have a true surface because it mostly consists of swirling gases and liquids deeper down. Saturn is so light that if there were an ocean big enough, the planet would float on it.



Rings of Rock

- Saturn's rings are made of billions of pieces of rocks and dust. Although the planets Jupiter, Uranus and Neptune also have ring systems, theirs aren't as bright nor as big as Saturn's.



Studying Saturn

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- The Cassini Probe was launched in 1997 on a mission to study Saturn, mostly its rings and its moons. Cassini arrived at Saturn finding out new things about it, June 30, 2004 until September 15, 2017, when unfortunately the probe ended its life with a plunge into Saturn's atmosphere.
 - The mission was still successful though, because of all the information it gathered-jets of water erupting from Enceladus (Saturn's eighth moon which is also the sixth largest, named after a Greek Titan who rebelled against the gods, later defeated by Athena or Aphrodite) and tracking down new moons.



Research Findings

- It wasn't until Cassini's final mission stages that the spacecraft could collect data on the rings. The spacecraft had always orbited outside of Saturn's rings, so it was impossible to tell the difference between the planet's mass and its rings.
- That all changed when the spacecraft took six trips crossing between the planet and its rings and researchers were able to measure the gravitational field of the planet and the rings during these crossings.
- In a new study, researchers from the Sapienza University of Rome analysed data collected during Cassini's final stages.
- After measuring the gravitational field of the rings and their mass, researchers found that Saturn's gravitational field is different from what was theoretically predicted: the rings are only ten to 100 million years old.
- The planet is around 4.5 billion years old, and so Saturn's iconic rings formed much later on!

