

# **Smoothest object in the solar system**





## Overview

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Europa , or Jupiter II, is the smallest of the four orbiting , and the sixth-closest to the planet of all the 95 known . It is also the in the . Europa was discovered independently by and and was named (by Marius) after , the mother of King of and lover of (the.

HighlightsEuropa has the smoothest surface of any solid body in the Solar SystemIts icy surface may hide a buried ocean full of more water than EarthThe European Space Agency (ESA) and NASA both have missions planned to visit Europa and other moons of JupiterWhich planet has the smoothest surface?

Jupiter's large icy moon Europa has the smoothest surface of any solid body in the Solar System. The only prominent relief on its surface are ridges a few hundred metres in height. The tidal forces which cause Io's intense volcanic activity also affect Europa. There are very few impact craters, meaning the surface is geologically young.

What is the smoothest object in the Solar System?

Europa is the smoothest known object in the Solar System, lacking large-scale features such as mountains and craters. [ 51 ] The prominent markings crisscrossing Europa appear to be mainly albedo features that emphasize low topography.

What is the smallest moon in the Solar System?

Europa / jʊˈrɒʊpə / ɪ, or Jupiter II, is the smallest of the four Galilean moons orbiting Jupiter, and the sixth-closest to the planet of all the 95 known moons of Jupiter. It is also the sixth-largest moon in the Solar System.

Is there an ocean below the icy surface of the Moon?

Scientists have proposed that there is a global ocean of salty water 100 km (60 mi) below the icy surface of the moon. The ocean is created by the tidal effects (tidal heating) between Jupiter and Europa are what keeps the ice in liquid form below the moon's surface.



What is the smallest moon of Jupiter?

Europa is the smallest of the Galilean moons of Jupiter, and the sixth closest natural satellite to the planet. Galileo Galilei discovered it along with Io , Ganymede and Callisto. Despite it being the smallest of the Galilean moons it is still one of the largest moons in our Solar System. When was Europa discovered?

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Could Jupiter moon Europa have water geysers taller than Everest?

"Jupiter Moon Europa May Have Water Geysers Taller Than Everest".  
Space.com. Archived from the original on 15 December 2013. Retrieved 17 December 2013. ^ Fagents, Sarah A.; Greeley, Ronald; Sullivan, Robert J.; Pappalardo, Robert T.; Prockter, Louise M. (30 June 1999).



## Smoothest object in the solar system

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### The Six Moons Most Likely to Host Life in Our Solar System

Europa is the solar system's smoothest object, suggesting its surface is remade by interior processes more frequently than most other worlds besides Earth. Credit: 5W Infographic



### Photos: 10 extraordinary ocean worlds in our solar system

Ceres is the largest object in the Asteroid Belt, and the only dwarf planet in the inner solar system. It was originally formed as a mixture of porous rock with about 10% ice.



### [?GRE??? ?????TC?????In the solar system](#)

?GRE?????????GRE?????????GRE ?????TC?????????,In the solar system, collisions involving cosmic object are among the most \_\_\_\_ processes shaping surfaces: images of many solar objects show a proliferation of impact craters

### [Ice On Planets of the Solar System](#)

It is these planets which will in the near future become objects of great attention as the bases for studying the solar system and space. In this paper an attempt is made to summarize the available data on ice covers and ice on other planets on a scientific basis by using a



mathematical approach, so that the phenomena observed may be explained and our ideas on the structure ...



### In Depth , Europa - NASA Solar System Exploration

Voyager 1's closest approach to Jupiter occurred on March 4, 1979. The spacecraft snapped a full global image of Europa from a distance of about 1.2 million miles (2 million kilometers). A few months later, Voyager 2 had its closest encounter with Europa on July 9

### Newly Reprocessed Images of Europa Make This World Even ...

Jupiter's moon Europa is the smoothest object in the Solar System. There are no mountains, very few craters, and no valleys. It's tallest features are isolated massifs up to 500

### ESS



### List of Solar System objects most distant from the Sun

Positions of known outer Solar System objects  
Sun Jupiter trojans (6,178) Scattered disc (>300)  
Giant planets: J · S · U · N Centaurs (44,000)  
Kuiper belt (>1,000) (scale in AU; epoch as of January 2015; # of objects in parentheses) These Solar System minor planets are the furthest from the Sun as of December 2021.





## Scientists Think They've Cracked The Mystery of ...

Europa is the smoothest solid object in our Solar System, thanks to its thick shell of ice. Yet beneath its smooth exterior, Jupiter's fourth-largest moon seems to harbor secrets - namely a deep, salty ocean with intriguing potential for alien life.

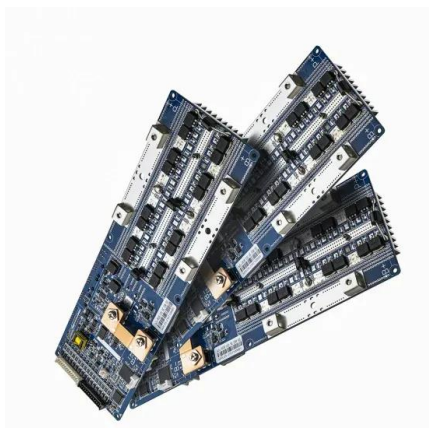


## Astronomy college course/Galilean moons of Jupiter

It is one of the smoothest objects in the solar system, with a layer of water surrounding the mantle of the planet, thought to be 100 kilometers thick. The smooth surface ...

### [7.5: The Gailean Moons of Jupiter](#)

Callisto is unique among the planet-sized objects of the solar system in the apparent absence of interior forces to drive geological change. You might say that this moon was stillborn, and it has remained geologically dead for more than 4 billion years (Figure (PageIndex{1})).



### [Shape of the Planets in the Solar System](#)

The shape of a space object depends on its mass: the bigger it is, the more its own gravity pulls it into a more round form. Saturn is the most oblate planet in the Solar System: as it rotates the fastest of all, its equatorial bulge is the thickest. Mercury and



## Europa (moon)

Overview  
Discovery and naming  
Orbit and rotation  
Physical characteristics  
Exploration  
Habitability  
See also  
External links

Europa /jˈroʊp/ , or Jupiter II, is the smallest of the four Galilean moons orbiting Jupiter, and the sixth-closest to the planet of all the 95 known moons of Jupiter. It is also the sixth-largest moon in the Solar System. Europa was discovered independently by Simon Marius and Galileo Galilei and was named (by Marius) after Europa, the Phoenician mother of King Minos of Crete and lover of Zeus (the ...



## These Are The 10 Largest Non-Planets In Our Solar System

Only 8 worlds make the astronomical cut as planets. Here are the 10 fascinating bodies that didn't make it. Astronomically, bodies within the Solar System must achieve three criteria in order [...]

## Mysterious objects spotted in the outer solar system

While it was highly difficult to search for solar system objects with multiple background stars, the scientists were able to localize 24 Kuiper Belt objects. Unfortunately, the Kuiper belt objects discovered until now require too much fuel for New Horizons to flyby, but new ones at greater distances might fall within the available fuel reach of the spacecraft.



## Where in the Solar System Are We Most Likely to Find Life?

Jupiter's third-largest moon, Io is incredibly volcanic: With more than 400 active volcanoes, it's believed to be the most geologically active

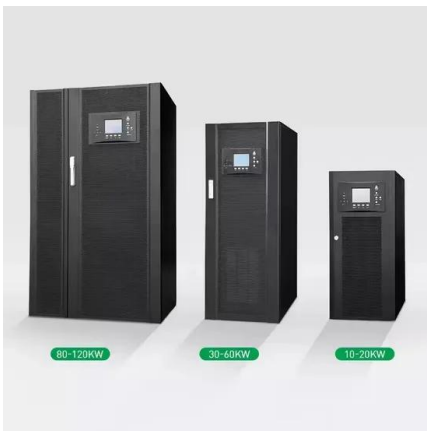


body in the solar system.



### **Astronomy college course/Galilean moons of Jupiter**

See: Europa Europa, the second of the four Galilean moons, is the second closest to Jupiter and the smallest at 3121.6 kilometers in diameter, which is slightly smaller than Earth's Moon. It is one of the smoothest objects in the solar system, with a layer of water



### [List of Solar System objects](#)

The following is a list of Solar System objects by orbit, ordered by increasing distance from the Sun. Most named objects in this list have a diameter of 500 km or more. The Sun, a spectral class G2V main-sequence star The inner Solar System and the Mercury

### [When was Europa discovered?](#)

Europa is the sixth largest moon and fifteenth largest object in the Solar System. Europa is the smallest of the Galilean moons discovered by Galileo. Europa's surface is made of frozen water and is the smoothest in the Solar System. There are very few





### Galilean moons

It is one of the smoothest objects in the solar system, with a layer of water surrounding the mantle of the planet, thought to be 100 kilometers thick. The smooth surface includes a layer of ice, while the bottom of the ice is theorized to be liquid water.

### Solar System Extremes

Solar System Extremes Biggest Planet: Jupiter. All the other planets in our Solar System could fit inside Jupiter. Smallest Planet: Pluto, a dwarf planet, which is smaller than many moons, including our moon. The Planet Closest in Size to the Earth: Venus is about 95% of the Earth's diameter and 82% of the Earth's mass.



### Solar System Exploration

The solar system has one star, eight planets, five dwarf planets, at least 290 moons, more than 1.3 million asteroids, and about 3,900 comets. We mean waaaay out there in our solar system - where the forecast might not be quite what you think. Let's look at the

### Europa , Facts, Composition & Exploration , Britannica

Europa is a rocky object covered with an extremely smooth, elaborately patterned surface of ice. Europa has a diameter of 3,130 km (1,940 miles), which makes it a ...





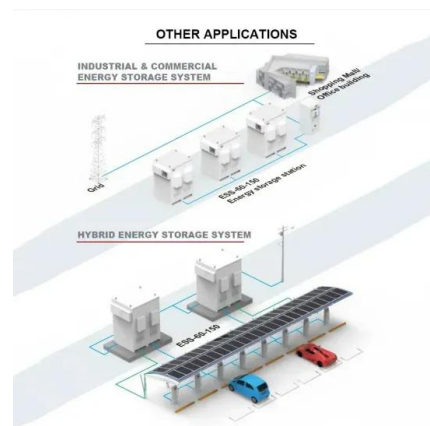
### Galilean Satellites

It is one of the smoothest objects in the Solar System, with a layer of water surrounding the mantle of the planet, thought to be 100 kilometers thick. The smooth surface includes a layer of ice, while the bottom of the ice is theorized to be liquid water.



### Solar System Facts

Our solar system includes the Sun, eight planets, five dwarf planets, and hundreds of moons, asteroids, and comets. Matter farther out in the disk was also clumping together. These clumps smashed into one another, forming larger ...



### Smoothest surface in the Solar System

Jupiter's large icy moon Europa has the smoothest surface of any solid body in the Solar System. The only prominent relief on its surface are ridges a few hundred metres in height. The tidal ...

### Other Objects in the Solar System , Earth Science

The dwarf planets of our solar system are exciting proof of how much we are learning about our solar system. With the discovery of many new objects in our solar system, in 2006, astronomers refined the definition of a planet. Their subsequent reclassification of





### [10 Interesting Facts about Europa](#)

Europa is also the object with the smoothest surface in the solar system, with there being no mountains, hills, or other noteworthy geologic features on its surface to mention. Although Galileo is recognized as having discovered Europa in January of the year 1610, it may have been discovered independently by the German astronomer Simon Marius a few days ...



### **Smoothest Surface Ever Created: May Lead To World's**

Physicists have created the "quantum stabilized atom mirror," the smoothest surface ever, according to an article in the journal *Advanced Materials*. The innovation is already being used in the



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