

Moons of the solar system



Titan (Saturn moon)

Venus

Io (Jupiter moon)

Sun

Pluto

Moon (Earth moon)

Mars

Europa (Jupiter moon)

Eris

Uranus

Earth

Callisto (Jupiter moon)

Kela and Emilia

The background of the slide is a composite image of various celestial bodies. On the left, a large, detailed view of Earth's Moon shows its craters and maria. In the center, there's a smaller, irregularly shaped asteroid or moonlet. To the right, a large, pale, and heavily cratered celestial body, likely Europa, is visible. Other smaller moons and planets are scattered in the background, including a bright yellow one and a reddish one.

Basic information

- Moons also known as natural satellites are astronomical bodies that orbit planets and asteroids
- The Solar system has 196 known moons
- Many of them are named for mythological characters except Uranus' moons are named for Shakespeare's plays
- Most moons are probably formed from the discs of gas and dust circulating around planets
- Mercury and Venus don't have any moons

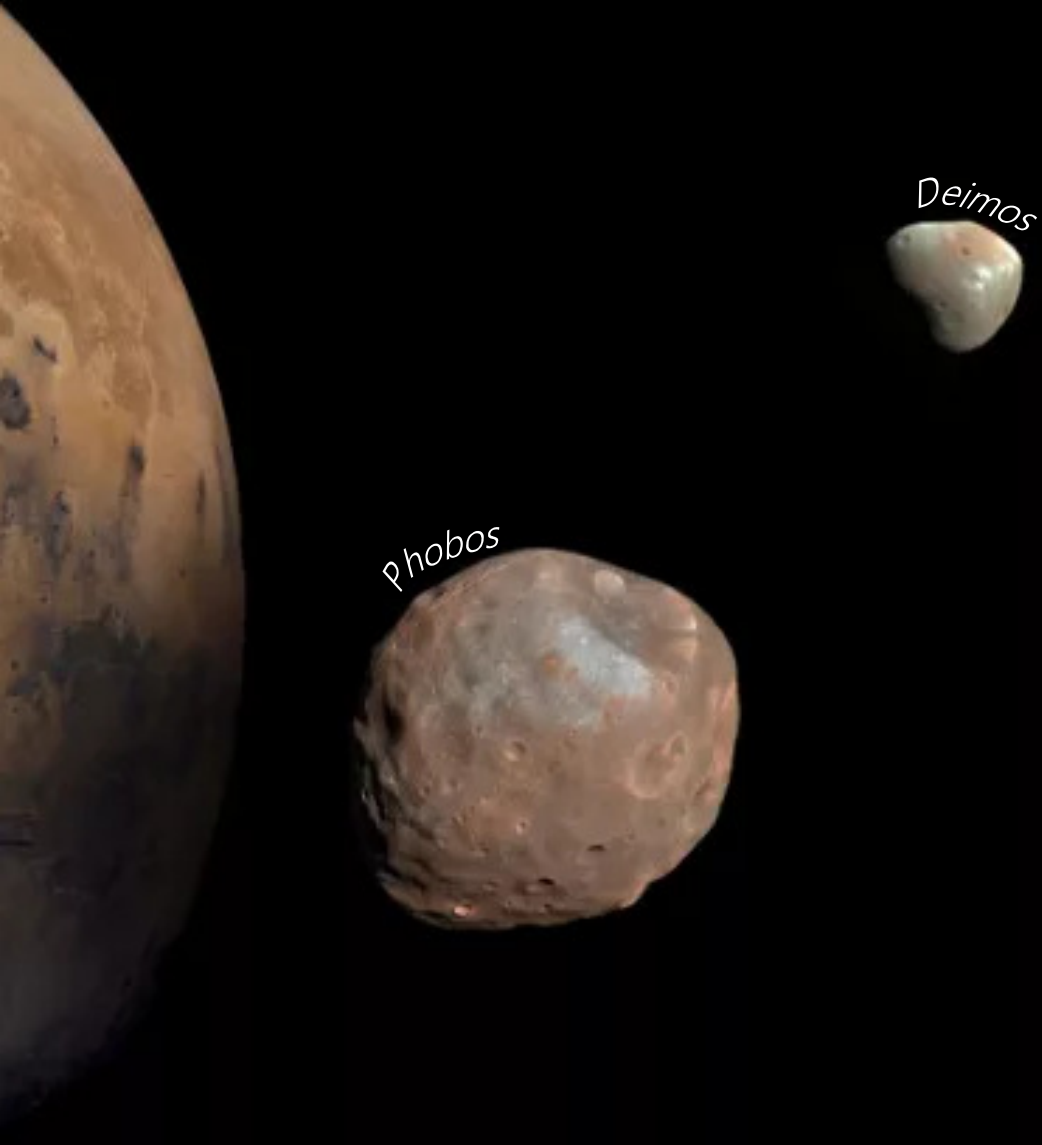
Moon of Earth

"the Moon"

- The 1st moon to be discovered
- The 5th largest moon in the Solar system
 - Radius: 1 737.5 kilometers (3.7x smaller than Earth)
- The only place where a human being has been beyond Earth
- Surface has numerous craters and light areas (highlands) and dark areas (maria) that represent rocks of different composition and ages and are also old basins of lava
- Temperature varies between 127 °c and -173 °c



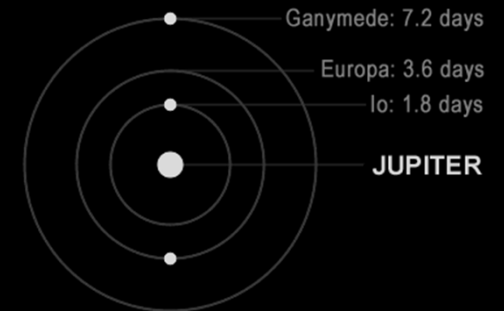
Moons of Mars



- Mars has two moons; **Phobos** and **Deimos**
- Both were discovered in 1877
- Smallest moons
- Phobos is a bit larger than Deimos and it orbits Mars three times a day
- Deimos takes about 30 h to orbit
- Both have a lumpy structure and are heavily-cratered and covered in dust and loose rocks



Moons of Jupiter

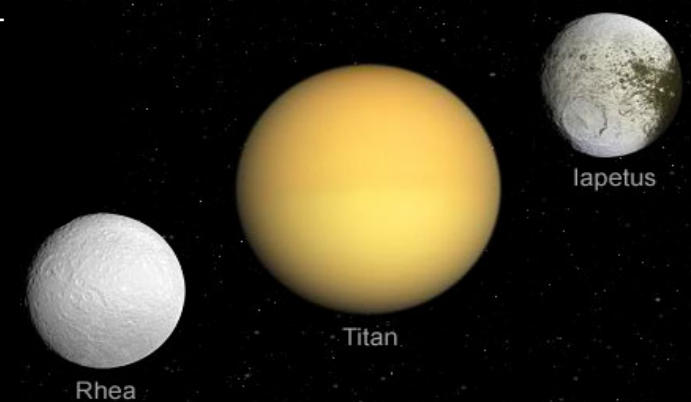


- Jupiter has 79 moons
 - 53 named and 26 that are waiting their official names
- The 4 biggest moons of Jupiter and the first objects found to orbit another planet are called **the Galilean moons** because they were found by Galileo Galilei in 1610. All of them are bright enough to be viewed from Earth without a telescope.
 1. **Ganymede** is the biggest moon in the whole Solar system (bigger than Mercury). It's the only moon known to have internally generated magnetic field. It has an icy surface .
 2. **Callisto** is the 2nd largest of the Galilean moons and the 3rd largest moon in the Solar System. It's is similar to our Moon because the surface is also heavily cratered.
 3. **Io** is the 3rd biggest Jupiter's moon and the 4th largest moon of the Solar system. It has the most volcano activity, the highest density and the least amount of water of all the moons in our Solar system.
 4. **Europa** is the smallest moon of the Galilean moons and 6th largest in the Solar system. Its surface is extremely flat and it contains mainly water ice. Scientists thinks that Europa is the best place in the solar system to look for alien life.



Moons of Saturn

- Saturn has 53 confirmed moons and nine waiting confirmation.
- 1. **Titan** is Saturn's biggest moon and the only known world other than Earth where any sort of liquid collects on its surface. Its surface is so cold which means the moon's surface is water ice instead of rock. This means methane and ethane exist on **Titan**.
- 2. **Rhea** is the second largest moon. It has a typical cratered surface. Its surface can be divided into two geologically different areas because half of its surface is based on crater density and the other half is icy.
- 3. The third biggest moon **Iapetus** is not perfectly round it's a bit flatten. It also has one bright icy side and one very dark side.



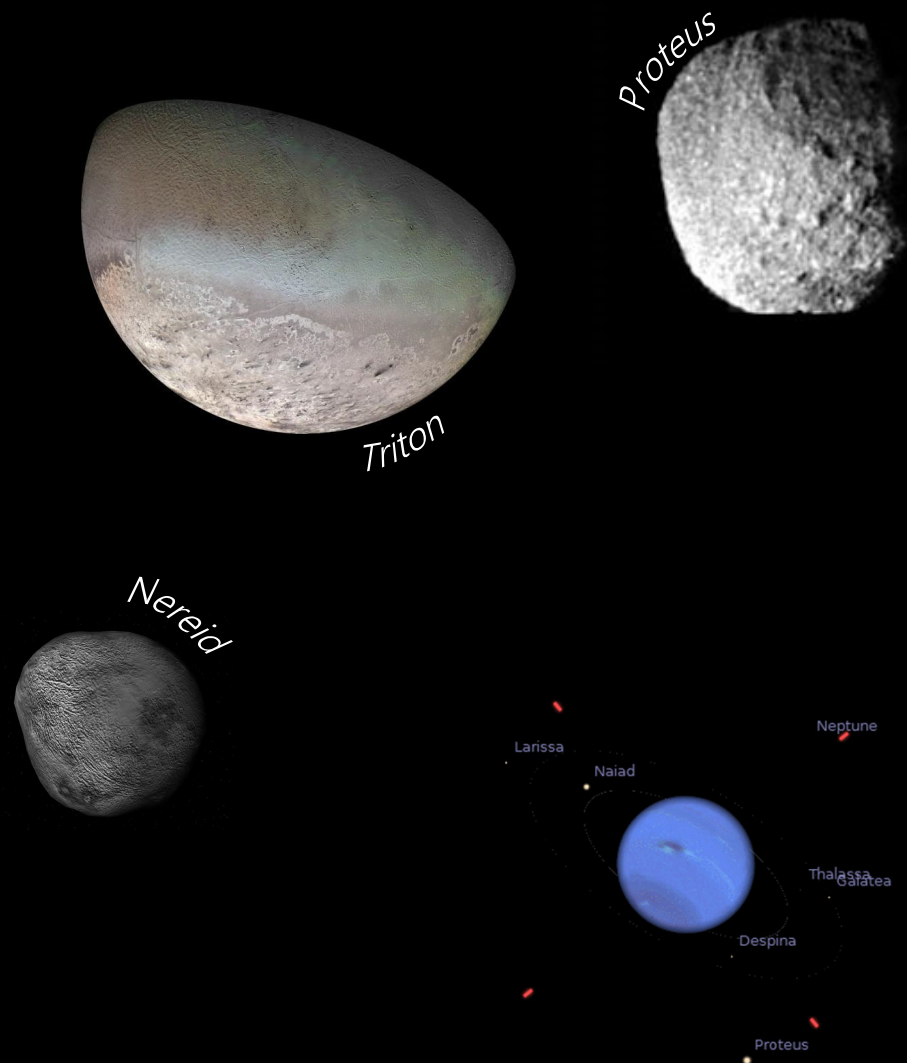
Moons of Uranus



- Uranus has 27 natural satellites. The five main moons are Miranda, Ariel, Umbriel, Titania and Oberon.
 1. The largest one **Titania's** surface is dark and lightly red in color and its covered with numerous impact craters.
 2. The outermost but the second largest **Oberon** has a red surface. But its fresh impact deposits are light blue. **Oberon's** surface is the most cratered of all the Uranian moons.
 3. **Umbriel** the 3rd largest moon of Uranus was discovered the same time as **Ariel**. **Umbriel's** surface is the darkest and reflects half as much light as **Ariel** and its light is blue.
 4. Fourth largest moon is **Ariel**. It's the most reflective Uranian moon. Its surface can be divided into three terrain types: cratered terrain, ridged terrain and plains.
 5. **Miranda** the smallest and innermost Uranus's satellite. It's surface is mostly water ice. It's the least spherical Uranian moon.

Moons of Neptune

- Neptune has 14 known moons.
1. **Triton** is the largest and the first Neptunian moon to be discovered. Almost half of **Triton's** surface has ridges, icy plains, troughs, furrows and few craters. The other half is covered with frozen nitrogen with water ice and dry ice.
 2. **Proteus** has a really dark surface and it was so close to Neptune that it was hard to discover.
 3. **Nereid's** shape is unknown. It's surface is composed of a mixture of water ice and some spectrally neutral material.



Moons of Dwarf Planets



- There are four official dwarf planets and the best knowns are **Pluto** and **Haumea**
- **Pluto**: has five moons they are Charon, Styx, Nix, Kerberos and Hydra. The biggest one is Charon which is sort of locked with Pluto. They always present the same face toward each other.
- **Haumea**: has two small satellites they are Haumea 1 Hi'iaka and Haumea 2 Namaka. They were both discovered in 2005.

Sources

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