

# Planet Jupiter

Diameter: 142,984 km - here: 143 mm

Mass:  $1.9 \cdot 10^{27}$  kg

Surface temperature: -108 °C (average)

Distance to the Sun: 779 million km - here: 779 m

Orbital period: 11.9 years

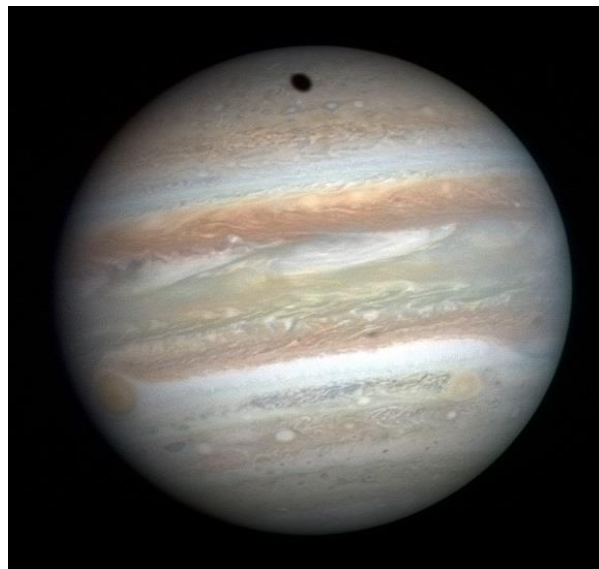
Number of moons: 79

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Möbeltischlerei Christian Schulz, Müllrose

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## Planet Jupiter



Picture (Jupiter):

Author: NASA/Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute

[https://en.wikipedia.org/wiki/Jupiter#/media/File:Jupiter New Horizons.jpg](https://en.wikipedia.org/wiki/Jupiter#/media/File:Jupiter_New_Horizons.jpg)

Jupiter as the largest and most massive planet of the solar system is named after the highest god of the Roman mythology (astronomical symbol: ♃). It has about 2.5 times the mass of all other planets. Jupiter consists mainly of gas (hydrogen and helium), which is why it is also assigned to the so-called gas planets. In the depths of its atmosphere, there is another special feature, the metallic hydrogen. Because of the high pressure, the hydrogen behaves like a metal. Despite its size, it has the fastest rotation time of all planets. A special feature is its large red spot, a whirlwind that has existed for thousands of years. Jupiter gives off more energy than it receives from the sun. This is due to physical effects (segregation of gases, cooling of the interior). Currently 92 moons are known and a weakly formed ring system. The best known are the four Galilean moons (Io, Europa, Ganymede, Callisto). When Galileo first used the telescope to observe the starry sky, he discovered them and thus finally disproved the shell structure of the universe.

#### **Important data of Jupiter:**

Semi-major axis:	5.20 AU (778.51 mio. km)
Perihelion – Aphelion:	4.95 – 5.46 AU
Eccentricity:	0.049
Inclination (ecliptic):	1.30°
Orbital period (sidereal):	11 a 315 d
Average orbital speed:	13.06 km/s
Smallest – biggest Earth distance:	3.93 – 6.47 AU
Equatorial diameter:	142,984 km
Polar diameter:	133,708 km
Mass:	about 318 Earth masses ( $1.899 \cdot 10^{27}$ kg)
Mean density:	1.37 g/cm <sup>3</sup>
Surface gravity:	24.79 m/s <sup>2</sup>
Escape velocity:	59.5 km/s
Synodic rotation period:	9 h 55 min 30 s
Axial tilt:	3.13°
Temperature (medium):	165 K (–108 °C)

Link: <https://en.wikipedia.org/wiki/Jupiter>

#### **Moons:**

##### **Moon Io:**

<https://astrowis.de/wp-content/uploads/Mond Io englisch.pdf>

##### **Moon Europa:**

<https://astrowis.de/wp-content/uploads/Mond Europa englisch.pdf>

##### **Moon Ganymede:**

<https://astrowis.de/wp-content/uploads/Mond Ganymed englisch.pdf>

##### **Moon Callisto:**

<https://astrowis.de/wp-content/uploads/Mond Kallisto englisch.pdf>

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