# Old Town Sidewalk Astronomers 

## http://otastro.org

We stop people on sidewalks and show them the craters of the Moon, the moons of Jupiter, the rings of Saturn, or the spots on the Sun. For just a moment, they have a personal connection to the universe around them, and sometimes life seems a little better after that.

We call it "urban guerilla astronomy."
The Sidewalk Astronomers was founded in 1968 in San Francisco by John Dobson. You can find more information about the Sidewalk Astronomers, our observing plans, and current astronomical information on the Old Town Astronomers web page, http://otastro.org. We have an email announcement list to let you know about sidewalk and other astronomy events in the LA area.

Our group most often sets up telescopes in old town Pasadena on Colorado Blvd. near Delacey, and in old town Monrovia at Myrtle and Lime. Our events are subject to clear skies; we will notify our email list with updates. If you would like us to visit your school or community group, please email for help with the astronomical calendar. OTSA is part of the Sidewalk Astronomers, and the JPL Saturn Observation Campaign. Telescope viewing is always free of charge.

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## A little about our most frequent targets:

JUPITER The fifth planet from the Sun, Jupiter is the most massive planet in our solar system, and in composition it resembles a small star. In fact, if Jupiter had been between fifty and one hundred times more massive, it would have become a star rather than a planet. One of the most prominent visible features of Jupiter is the Great Red Spot, a massive storm that has raged for more than 300 years and is nearly the size of three Earths.

To date, 63 moons have been discovered orbiting Jupiter - the four largest are easily visible in a small telescope. Ganymede is the largest planetary moon and has its own magnetic field. Liquid oceans may lie beneath the crusts of Europa and Callisto. Io has hundreds of active volcanoes.

- Distance at opposition (closest): 365 million miles
- Orbital period (its year): 12 years
- Diameter: 89,700 miles

SATURN, the sixth planet from the Sun, is the most distant of the five planets known to ancient stargazers. In 1611, Italian Galileo Galilei was the first astronomer to gaze at Saturn through a telescope. Like Jupiter, Uranus, and Neptune, Saturn is a gas giant. It is made mostly of helium and hydrogen. Saturn's ring system is the most extensive and complex in our solar system; including the faint E ring, it extends nearly 300,000 miles from the planet. In fact, Saturn and its main rings would just fit in the distance between Earth and the Moon.
In 2004 the Cassini-Huygens spacecraft arrived at Saturn and began studying the planet and its largest moon, Titan. Titan is the second-largest moon in the Solar System and believed to have an atmosphere similar to Earth's long ago. To date, Saturn is known to have at least 61 moons, of which 52 have been named.

- Distance at opposition (closest): 746 million miles
- Orbital period (its year): 29.5 years
- Diameter (excluding rings): 74,500 miles

MOON Earth's only natural satellite is smaller than four other moons in the solar system, yet it is larger than Pluto. More than 70 spacecraft have been sent to the Moon and 12 astronauts have walked upon its surface. The presence of the Moon stabilizes Earth's wobble. Over billions of years, the Earth's stable spin made for a stable climate that may have influenced the development and growth of life here.
From Earth, we see the same face of the Moon all the time because the Moon rotates just once on its own axis in very nearly the same time that it travels once around Earth. This is known as "synchronous rotation." Many other moons in the solar system have similar synchronous rotation, and are said to be "tidally locked."

- Distance: 239,000 miles
- Time between full moons (or new moons): 29.5 days
- Diameter: 2,159 miles

For more information about the solar system, visit The Nine Planets Website at http://nineplanets.org.

