

## + Researchers

More women astronomers who have contributed to our knowledge about the Solar System:

### Mary Orr Evershed (United States, 1867-1949)

"There can be no doubt that, as well as gravity and an eruptive force, there are other forces operating on the surface of the Sun," Evershed wrote. She observed the effect of electrical forces on ionised gases and magnetic forces in the areas around sunspots.



### Charlotte Moore Sittley (United States, 1898-1990)

AsDedicated almost her entire career as an astronomer to studying atomic lines in the spectra of sunspots. Published the definitive work on the solar spectrum in which she compiled, organised and analysed all of the available laboratory data.

### Annie Scott Dill Russell Maunder (Ireland, 1868-1947)

Editor of the *Journal of British Astronomical Association* from 1894 to 1896. Annie Maunder specialised in the Sun and argued that the Earth influences the number and area of sunspots. She also proposed that, when seen from the earth, sunspots are less frequent from the east to west rim. She discovered that changes in the Sun cause fluctuations in the earth's climate.

### Hanna Steele Petit (United States, 1889-1962)

Worked at the Mount Wilson Observatory after receiving her Doctorate. Led expeditions to study solar eclipses in Colorado in 1918, Honey Lake in 1923 and Point Lorna, California, in 1940. The last expedition in which she took part was in Lancaster, New Hampshire, in 1932.



SHE ASTRONOMER

The Sun and the bodies orbiting around it make up the Solar System.

# A mediocre star... but it is our own

The Sun is Earth's nearest star. It is 149,597,871 kilometres away. This distance is called an Astronomical Unit or AU and it is equivalent to eight light- minutes. This means that the light we see was emitted by the Sun eight minutes ago.

Some facts about our star:

**5,800 K** is its surface temperature.

It was formed some  
**5,000**  
million  
years ago.

In around another  
**5,000**  
million years  
it will become  
a red giant.

Its mass  
mass is two quintillion kilos  
**2,000,000...**  
(with a further 24 zeros)

It is 330,000 times  
heavier than the  
earth

Its diameter is  
**1,392,000 km**

109 times the  
diameter of our  
own planet

## MILESTONES IN SOLAR SYSTEM ASTRONOMY

**Circa 7000 BC**

Paintings at **Chanchal de Mahoma** (Spain) representing the phases of the Moon.

**2300 BC**

The first recorded observation of a **comet** takes place in China.

**1302 BC**

An **eclipse of the Sun** and a **supernova** are observed, in China.

**800 BC**

First observations of **sunspots**, in China.

**Second Century AD**

The **Ptolemaic system** provides an explanation for the movement of the Sun, the Moon and the known planets and locates the Earth in the centre.

**1100 BC**

Lists of stars along the ecliptic are produced in Egypt for **telling the time** at night.

**4800 BC**

**Calendar** stone engraving found on the border between Egypt and Sudan

**Circa 1450 BC**

The Egyptians begin using **solar days**.

**1610**

**Galileo** discovers four satellites of Jupiter.

**1758**

**Nicole Reine-Lepaute** defines parameters for observing Halley's comet the following year

**1781**

The planet **Uranus** is discovered.

**1846**

Discovery of **Neptune**.

**1969**

**First human on the Moon**.

**1930**

Discovery of **Pluto**.

**1801**

Discovery of **Ceres**.

**2005**

An object larger than Pluto, the dwarf planet **Eris**, is discovered in the Kuiper belt.

**1977**

**Rings of Uranus** discovered.

**2006**

**Pluto** is included in the new category of dwarf planets.

**2008**

The second NASA Phoenix mission finds **ice at Mars's North Pole**.