

INTERNATIONAL YEAR OF ASTRONOMY 2009



Anniversary of Galileo's Observations

13 January 2009

IYA2009 may only be two weeks old, but it is already time to mark an important historical event.

399 years ago to the day, Italian astronomer Galileo Galilei had completed improvements to his astronomical telescope, and turned this instrument to the heavens. He observed the distant planet Jupiter, then an enigmatic and mysterious body. Galileo discovered three faint dots either side of this world; what could they be?

Over the following months, Galileo systematically observed Jupiter and these pin-pricks of light, discovering a fourth, and that they were moving around Jupiter. Could they be moons, other world in their own right? That is exactly what they were eventually revealed to be. Galileo had discovered the first moons around a planet other than our own! Now called Io, Europa, Ganymede, and Callisto, collectively they are known as the Galilean Satellites, in honour of their discoverer.

This was such an important event, it's no wonder that we are marking the occasion 399 years later. For a start, it proved beyond any doubt how useful telescopes could be. These new instruments had begun to expand mankind's horizons like never before. But perhaps even more importantly, Galileo's realisation that the moons were orbiting Jupiter cast doubt on the generally accepted view that the Earth was the centre of the Universe. Observations of the Galilean moons would be used to support Copernicus' theory of a Sun-centred Universe, which we now know is much closer to the truth.

You can mark the occasion as part of IYA2009. Galileo was able to see the moons using his basic telescope, so it is no problem for even simple modern instruments. A [Galileoscope](#), for example, will let you see the planet and moons, much as Galileo did all that time ago. On a crisp and cloudless night, find a location to set up your telescope. Ideally, this should be far away from street lights. Next, locate the planet Jupiter using astronomy software like [Redshift](#). You may need to observe later in the year, to get a good view. Then focus your telescope on Jupiter, and try to pick out the dots of light either side. These are the moons, just as Galileo saw them! You can even track their positions over consecutive nights, as he originally did. [Sky and Telescope's website](#) has interactive observing tools, such as maps and charts of the moons' positions, to help even more. Local observatories and science centres are also excellent sources of information and may have instruments that you can use.

Even if you don't observe Jupiter and the Galilean moons during 2009, it's still worth looking up on a starry night and remembering how, 399 years ago, history was made by an astronomer doing the same thing. Humanity had taken its first steps into the wider Universe, thanks to Galileo and his telescope.

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