



The yearlong celebration of science continues...

Astronomy: The YoS2009 July Theme



Image Credits: (from left to right): Lee Pullen, International Astronomical Union; International year of Astronomy, Logo Altered; Dark Skies Awareness; Andreas O. Jaunsen/IAU/IYA2009/Galileoscope

➤ Celebrate Astronomy

Ever hear of a quadricentennial? Well, 2009 marks the 400th anniversary of Galileo's use of a telescope to study the skies. Have you ever wondered about the excitement Galileo felt when he first saw lunar craters and mountains, the moons of Jupiter and other celestial wonders? We encourage you to explore the cosmos around us. The International Astronomical Union (IAU) and UNESCO initiated The International Year of Astronomy 2009 (IYA2009), which is a global effort to help the citizens of the world rediscover their place in the Universe through the day- and night-time sky, and thereby engage a personal sense of wonder and discovery. To keep up to date on astronomy information and events happening in the United States during IYA2009, please visit www.astronomy2009.us.

➤ Why Celebrate Astronomy?

Astronomy, the oldest science in history, has played an important role in most, if not all, cultures over the ages. Thanks to advanced telescopes and space probes, astronomy continues to be a trailblazer, enhancing our knowledge by delivering breathtaking discoveries almost on a weekly basis.

Everyone should realize the impact of astronomy and other fundamental sciences on our daily lives, and understand how scientific knowledge can contribute to a more equitable and peaceful society.

"Astronomy is a powerful expression of the human intellect. Huge progress has been made in the last few decades. One hundred years ago we barely knew of the existence of our own Milky Way. Today we know that many billions of galaxies make up our Universe and that it originated approximately 13.7 billion years ago. One hundred years ago we had no means of knowing whether there were other solar systems in the Universe.

Today we know of more than 200 planets around other stars in our galaxy and we are moving towards an understanding of how life might have first appeared. One hundred years ago we studied the sky using only optical telescopes and photographic plates. Today we observe the Universe from Earth and from space, from radio waves to gamma rays, using cutting edge technology. Media and public interest in astronomy have never been higher and major discoveries are front page news throughout the world. The IYA2009 will meet public demand for both information and involvement." [Excerpt by: Catherine Cesarsky, International Astronomical Union President].

The most incomprehensible thing about the universe is that it is comprehensible.

- Albert Einstein

A time will come when men will stretch out their eyes.

They should see planets like our Earth.

- Christopher Wren

*For more resources to explore astronomy, please visit:
http://www.yearofscience2009.org/themes_astronomy/celebrate/*

➤ Examples of Amazing Discoveries in Astronomy!

[Text from: Discover Magazine, which "compiled a special report on 100 astonishing discoveries in 2008- the breakthroughs that are transforming our understanding of the world."]

* **Baby Stars:** At the center of the Milky Way is a supermassive black hole, and ringing it are ultramassive young stars that should not be there: They exist under gravitational conditions that shouldn't permit the process of star formation.

* **Youngest Planet:** "A thick lump of dust, rocks, and gas" is how astronomer Jane Greaves of the University of St. Andrews in Scotland describes the new protoplanet she reported on in April 2008 at a meeting in Belfast sponsored by the Royal Astronomical Society.

* **Giant Magnetic Web:** The brightest galaxy in a cluster within the Perseus constellation looks like a fiery spiderweb, with filaments reaching out from a supermassive black hole at the center.

* **Binary Black Hole:** In January 2008, an international team of astronomers confirmed that one of the largest black holes in the universe is paired with a much smaller partner nearby- the first definitive observation of black holes in a close binary system.