Beat: Technology

Astronomers discover 14th moon orbiting Neptune

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USPA News - Astronomers have discovered a new moon orbiting the blue-green planet Neptune, raising the number of known satellites circling the giant planet to fourteen, NASA announced on Monday. The latest moon is so small it escaped detection by a spacecraft in 1989. The fourteenth moon, designated S/2004 N 1, is estimated to be no more than 12 miles (19 kilometers) across, making it the smallest known moon in the Neptunian system.

Neptune is the eighth and farthest planet from the Sun in our solar system, but is the fourth-largest planet by diameter and the third-largest by mass. The body was discovered on July 1 by Mark Showalter of the SETI Institute in California. He made the discovery while studying the faint ring-arcs of the giant planet and, on a whim, extended his analysis outward to regions well beyond the ring system when he noticed an extra white dot about 65,400 miles (105,250 kilometers) from Neptune. "The moons and arcs orbit very quickly, so we had to devise a way to follow their motion in order to bring out the details of the system," Showalter said about his discovery. "It`s the same reason a sports photographer tracks a running athlete - the athlete stays in focus, but the background blurs." Showalter then analyzed the movement of the white dot that appears repeatedly in more than 150 archived photographs taken by NASA`s Hubble Space Telescope between 2004 and 2009. He then plotted a circular orbit for the moon, which completes one revolution around Neptune every 23 hours. The moon is so small and dim that it is roughly one hundred million times fainter than the faintest star that can be seen with the naked eye, and it even escaped detection by NASA`s Voyager 2 spacecraft when it surveyed Neptune`s system of moons and rings in 1989. It will likely take years before the moon, located between the orbits of the moons Larissa and Proteus, is given a real name. Neptune`s largest moon is Triton, which is nearly the size of Earth`s moon. It is believed Triton may be a captured icy dwarf planet from the Kuiper Belt at the outer rim of our solar system, and this capture would have gravitationally torn up any original satellite system Neptune possessed. Many of the moons now seen orbiting the planet likely formed after Triton settled into its unusual retrograde orbit.

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