

News & Comments

Newly Discovered Near-Earth Asteroids Lurk Concealed in the Sun's Glare

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Telescopes are usually pointed outward from Earth because of the Sun's glare. According to new research, telescopic surveys prepared to look in the opposite direction can find a lot of interesting things.

The discoveries of near-Earth objects, or NEOs, between the Earth and the Sun, are only just beginning, according to NASA's Scott Sheppard. A number of previously unknown asteroids have been discovered by these new telescopic surveys.

Ayló'chaxnim 2020 AV2 is the first asteroid discovered with an orbit interior to Venus, while 2021 PH27 is the asteroid with the longest orbital period around the Sun. The orbit of 'Ayló'chaxnim is the first to lie entirely between the Sun and Venus.

Planetary and moon craters indicate that the number of NEOs has been steady over the last few billion years. It is reasonable to assume that NEOs are being replenished in some way given their dynamically unstable orbits (which last about 10 billion years) and unpredictable movements (caused by sun exposure).

Newly discovered asteroids are categorized based on their positions: Atiras (with orbits interior to Earth), Vatiras (with orbits interior to Venus), and hypothetical Vulcanoids (with orbits interior to Mercury). The movement of an asteroid is determined by its rotation, size, albedo, and distance from the Sun, according to Sheppard. Its movement becomes larger as an asteroid gets smaller and absorbs more sunlight.

We should be able to gain a better understanding of the movements of these asteroid discoveries, as well as how the number of NEOs has remained constant over this period. The majority of NEOs are thought to be dislodged asteroids from the main belt between Mars and Jupiter. Atiras and Vatiras may also be available in stable inner reservoirs of NEOs, according to Sheppard. During close contact with the Sun, these could obliterate asteroids that exit the Solar System or crash into a planet. Asteroids that are smaller are more difficult to spot. About 90 percent of the so-called 'planet killer' NEOs have already been discovered - those greater than one kilometer (0.62 miles).

KEYWORDS

Space, science, asteroid, Venus, NEO, near-Earth objects, discovery, Mars, Jupiter, Solar System

