

Kuiper, Gerard Peter Encyclopedia Article

Kuiper, Gerard Peter

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Kuiper, Gerard Peter

Dutch-American Astronomer 1905-1973

Gerard Peter Kuiper was the father of modern planetary astronomy. His work ran the gamut from star and planetary system formation to the study of the planets themselves. He used techniques ranging from visual observations to those requiring the latest technology, including **infrared** detectors, airborne observatories, and spacecraft.

Kuiper was born in Harenkarspel, the Netherlands. While in his native country, Kuiper made important contributions to the study of binary stars, which led to work on planetary system formation after he moved to the United States.

Gerard Peter Kuiper, astronomer and professor at Yerkes Observatory of the University of Chicago, explaining his theory that there is a disk of comets beyond Neptune's orbit.

During the winter of 1943-1944, Kuiper made **spectrographic studies** of the major planets and satellites, leading to the discovery that Saturn's largest moon, Titan, had an atmosphere containing methane. Studies of the brightnesses of the moons of Uranus and Neptune led to the discovery of additional satellites: Miranda, orbiting Uranus, in 1948; and Nereid, orbiting Neptune, in 1949.

In 1951, he proposed that a disk of comet nuclei extends from the solar system's planetary zone out to as much as 1,000 times the Earth-Sun distance (the astronomical unit [AU]). This is now called the Kuiper Belt and is recognized to extend from Neptune's distance (about 30 AU) to perhaps 50 to 100 AU.

In 1960, Kuiper founded the Lunar and Planetary Laboratory at the University of Arizona. He remained active in his later years, traveling and conducting site surveys for new observatories. Kuiper died in 1973.*

***A now-retired National Aeronautics and Space Administration airborne observatory that made groundbreaking infrared observations from the stratosphere was named after Kuiper.**

See Also

Astronomy, History of (Volume 2); Careers in Space Science (Volume 2); Comets (Volume 2); Kuiper Belt (Volume 2); Neptune (Volume 2); Saturn (Volume 2); Uranus (Volume 2).

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Internet Resources

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