

Famous Comets

On July 23, 1995, an unusually large and bright comet was seen outside of Jupiter's orbit by Alan Hale of New Mexico and Thomas Bopp of Arizona. Careful analysis of Hubble Space Telescope images suggested that its intense brightness was due to its exceptionally large size. While the nuclei of most comets are about 1.6 to 3.2 km (1 to 2 miles) across, Hale-Bopp's was estimated to be 40 km (25 miles) across. It was visible even through bright city skies, and may have been the most viewed comet in recorded history. Comet Hale-Bopp holds the record for the longest period of naked-eye visibility: an astonishing 19 months. It will not appear again for another 2,400 years.

COMET HALE-BOPP



Comet Hale-Bopp

Anchor Tab

COMET SWIFT-TUTTLE 1992



This comet was first seen in July 1862 by American astronomers Lewis Swift and Horace Tuttle. As Comet Swift-Tuttle moves closer to the Sun every 120 years, it leaves behind a trail of dust debris that provides the ingredients for a spectacular fireworks display seen in July and August. As Earth passes through the remnants of this dust tail, we can see on a clear night the Perseid meteor shower. Comet Swift-Tuttle is noted as the comet some scientists predicted could one day collide with Earth because the two orbits closely intercept each other. The latest calculations show that it will pass a comfortable 24 million km (15 million miles) from Earth on its next trip to the inner Solar System.

Comet Swift-Tuttle

On January 30, 1996, Yuji Hyakutake (pronounced "hyah-koo-tah-kay"), an amateur astronomer from southern Japan, discovered a new comet using a pair of binoculars. In the spring of that year, this small, bright comet with a nucleus of 1.6 to 3.2 km (1 to 2 miles) made a close flyby of Earth — sporting one of the longest tails ever observed. The Hubble Space Telescope studied the nucleus of this comet in great detail. This is not Comet Hyakutake's first visit to the inner Solar System. Astronomers have calculated its orbit and believe it was here about 8,000 years ago. Its orbit will not bring it near the Sun again for about 14,000 years.

COMET HYAKUTAKE



Comet Hyakutake

COMET HALLEY



Comet Halley is perhaps the most famous comet in history. It was named after British astronomer Edmund Halley, who calculated its orbit. He determined that the comets seen in 1531 and 1607 were the same objects that followed a 76-year orbit. Unfortunately, Halley died in 1742, never living to see his prediction come true when the comet returned on Christmas Eve in 1758. Each time this comet's orbit approaches the Sun, its 15-km (9-mile) nucleus sheds about 6 m (7 yards) of ice and rock into space. This debris forms an orbiting trail that, when falling to Earth, is called the Orionids meteor shower. Comet Halley will return to the inner Solar System in the year 2061.

Comet Halley

COMET SHOEMAKER-LEVY 9



Between July 16 and July 22, 1994, more than 20 fragments of Comet Shoemaker-Levy 9 collided with the planet Jupiter. Astronomers Carolyn and Eugene Shoemaker and David Levy discovered the comet in 1993. The Hubble Space Telescope took many spectacular pictures of this event as the comet's pieces crashed into Jupiter's southern hemisphere. It was the first collision of two Solar System bodies ever to be recorded. The impacts created atmospheric plumes many thousands of kilometers high that showed hot "bubbles" of gas with large dark "scars" covering the planet's sky.

Comet Shoemaker-Levy 9