NEOWISE

Figure: Neowise comet over Cluj-Napoca, Romania, July 15th

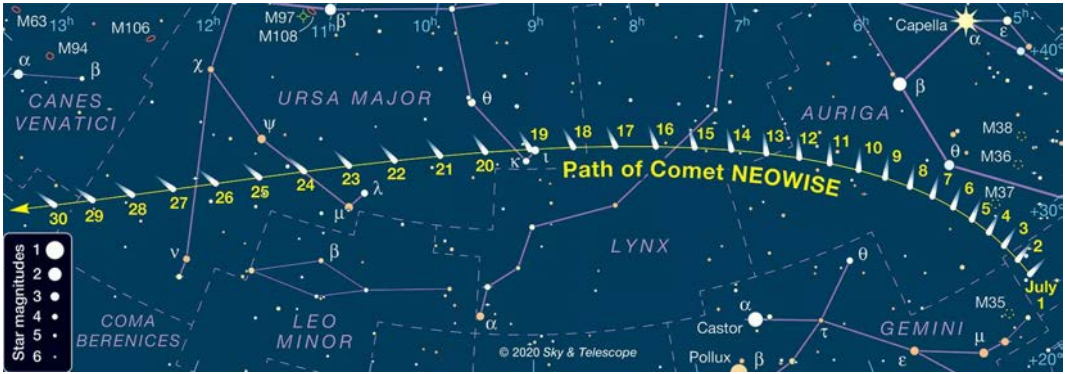


Figure: Path of comet NEOWISE

C/2020 F3 (NEOWISE) or **Comet NEOWISE** is a long period comet with a near-parabolic orbit discovered on March 27, 2020, by astronomers during the *NEOWISE* mission of the Wide-field Infrared Survey Explorer (WISE) space telescope. At that time, it was an 18th-magnitude object, located 2 AU (300 million km; 190 million mi) away from the Sun and 1.7 AU (250 million km; 160 million mi) away from Earth.

Figure: C/2020 F3 (NEOWISE) photographed from Germany on July 14, 2020.

Orbital characteristics	
Aphelion	538 AU (inbound)
	710 AU (outbound)
Perihelion	0.29478 AU
Semi-major axis	270 AU (inbound)
	355 AU (outbound)
Eccentricity	0.99921
Orbital period	$\approx$ 4400 yrs (inbound)
	$\approx$ 6700 yrs (outbound)
Inclination	128.93°
Argument of periapsis	37.28°
Dimensions	$\approx$ 5 km
Last perihelion	July 3, 2020
Next perihelion	unknown

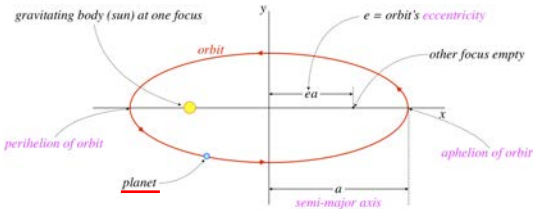


Figure: Elliptical Orbit

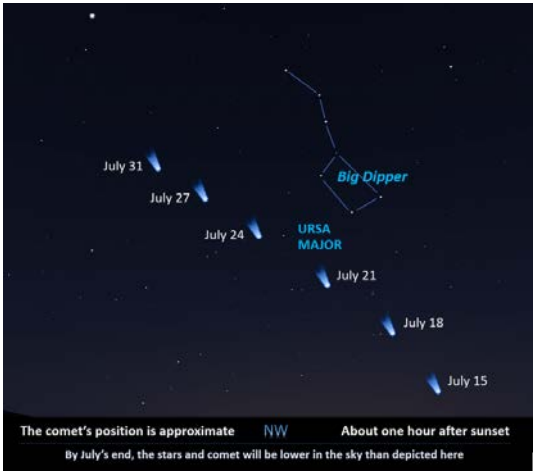
The **astronomical unit** (symbol: **au**, or **AU**) is a unit of length, roughly the distance from Earth to the Sun and equal to about 150 million kilometres (93 million miles). Since 2012 it has been defined as exactly 149597870700 m.

The **perihelion** is the point in the orbit of a planet, asteroid or comet that is nearest to the Sun. The word *perihelion* stems from the Greek words *"peri"*, meaning near, and *"Helios"*, meaning the Greek god of the Sun.

The **orbital eccentricity** of an astronomical object is a dimensionless parameter that determines the amount by which its orbit around another body deviates from a perfect circle. A value of 0 is a circular orbit, values between 0 and 1 form an elliptic orbit, 1 is a parabolic escape orbit, and greater than 1 is a hyperbola.

The **orbital period** is the time a given astronomical object takes to complete one orbit around another object, and applies in astronomy usually to planets or asteroids orbiting the Sun, moons orbiting planets, exoplanets orbiting other stars, or binary stars.

Figure: Comet NEOWISE on July 10 over Odessa, Ucraine



Discovered on March 27, 2020 by NASA's Near-Earth Object Wide-field Infrared Survey Explorer (NEOWISE) mission, Comet NEOWISE was putting on a dazzling display for skywatchers before it disappears, not to be seen again for another 6800 years.

Comet NEOWISE was closest to Earth on July 23, 2020, 01:09 UT, passing some 64 million miles (103 million km) from our planet. Many observers have reported that - once you spot it with binoculars - you can remove them and glimpse this comet as a fuzzy object, using only the unaided eye.