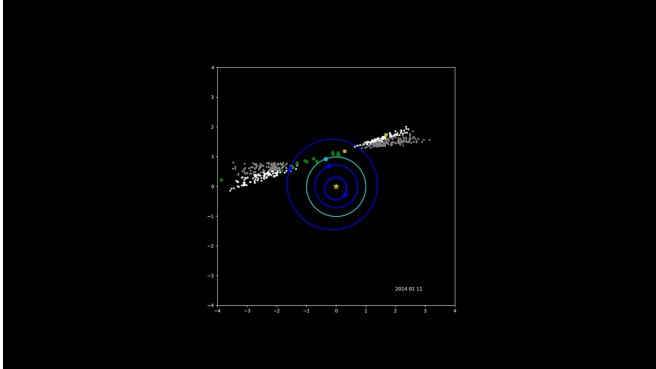


Four years of NASA NEOWISE data

23 April 2018, by Dc Agle



This movie shows the progression of NASA's Near-Earth Object Wide-field Survey Explorer (NEOWISE) investigation for the mission's first four years following its restart in December 2013. Green dots represent near-Earth objects. Gray dots represent all other asteroids which are mainly in the main asteroid belt between Mars and Jupiter. Yellow squares represent comets. Credit: NASA/JPL-Caltech/PSI

NASA's Near-Earth Object Wide-field Infrared Survey Explorer (NEOWISE) mission has released its fourth year of survey data. Since the mission was restarted in December 2013, after a period of hibernation, the asteroid- and comet-hunter has completely scanned the skies nearly eight times and has observed and characterized 29,375 objects in four years of operations. This total includes 788 near-Earth objects and 136 comets since the mission restart.

Near-Earth objects (NEOs) are comets and asteroids that have been nudged by the [gravitational attraction](#) of the planets in our solar system into orbits that allow them to enter Earth's neighborhood. Ten of the objects discovered by NEOWISE in the past year have been classified as [potentially hazardous asteroids](#) (PHAs). Near-Earth objects are classified as PHAs, based on their size and how closely they can approach Earth's orbit.

"NEOWISE continues to expand our catalog and knowledge of these elusive and important objects," said Amy Mainzer, NEOWISE principal investigator from NASA's Jet Propulsion Laboratory in Pasadena, California. "In total, NEOWISE has now characterized sizes and reflectivities of over 1,300 near-Earth objects since the spacecraft was launched, offering an invaluable resource for understanding the physical properties of this population, and studying what they are made of and where they have come from."

The NEOWISE team has released an animation depicting detections made by the telescope over its four years of surveying the solar system.

More than 2.5 million infrared images of the sky were collected in the fourth year of operations by NEOWISE. These data are combined with the year one through three NEOWISE data into a single publicly available archive. That archive contains approximately 10.3 million sets of images and a database of more than 76 billion source detections extracted from those images.

Originally called the Wide-field Infrared Survey Explorer (WISE), the spacecraft launched in December 2009. It was placed in hibernation in 2011 after its primary astrophysics mission was completed. In September 2013, it was reactivated, renamed NEOWISE and assigned a new mission: to assist NASA's efforts to identify and characterize the population of near-Earth objects. NEOWISE also is characterizing more distant populations of asteroids and comets to provide information about their sizes and compositions.

Provided by Jet Propulsion Laboratory

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