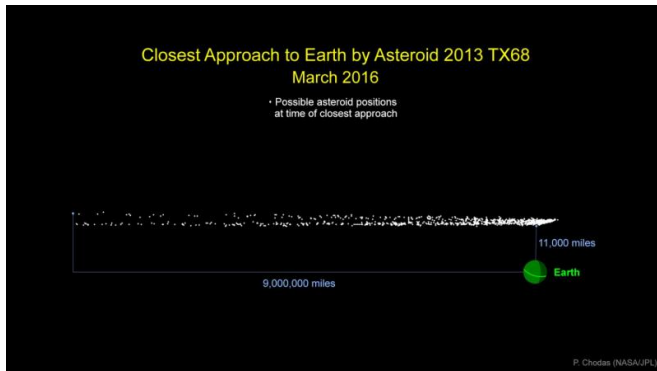


Small asteroid to pass close to Earth March 5

3 February 2016, by Dwayne Brown / Laurie Cantillo



Graphic indicates the cloud of possible locations asteroid 2013 TX68 will be in at the time of its closest approach to Earth during its safe flyby of our planet on March 5. Image credit: NASA/JPL-Caltech

A small asteroid that two years ago flew past Earth at a comfortable distance of about 1.3 million miles (2 million kilometers) will safely fly by our planet again in a few weeks, though this time it may be much closer.

During the upcoming March 5 flyby, [asteroid](#) 2013 TX68 could fly past Earth as far out as 9 million miles (14 million kilometers) or as close as 11,000 miles (17,000 kilometers). The variation in possible closest approach distances is due to the wide range of possible trajectories for this object, since it was tracked for only a short time after discovery.

Scientists at NASA's Center for NEO Studies (CNEOS) at the Jet Propulsion Laboratory in Pasadena, California, have determined there is no possibility that this object could impact Earth during the flyby next month. But they have identified an extremely remote chance that this small asteroid could impact on Sep. 28, 2017, with odds of no more than 1-in-250-million. Flybys in 2046 and 2097 have an even lower probability of impact.

"The possibilities of collision on any of the three future flyby dates are far too small to be of any real concern," said Paul Chodas, manager of CNEOS. "I fully expect any future observations to reduce the probability even more."

Asteroid 2013 TX68 is estimated to be about 100 feet (30 meters) in diameter. By comparison, the asteroid that broke up in the atmosphere over Chelyabinsk, Russia, three years ago was approximately 65 feet (20 meters) wide. If an asteroid the size of 2013 TX68 were to enter Earth's atmosphere, it would likely produce an air burst with about twice the energy of the Chelyabinsk event.

The asteroid was discovered by the NASA-funded Catalina Sky Survey on Oct. 6, 2013, as it approached Earth on the nighttime side. After three days of tracking, the asteroid passed into the daytime sky and could no longer be observed. Because it was not tracked for very long, scientists cannot predict its precise orbit around the sun, but they do know that it cannot impact Earth during its flyby next month.

"This asteroid's orbit is quite uncertain, and it will be hard to predict where to look for it," said Chodas. "There is a chance that the asteroid will be picked up by our asteroid search telescopes when it safely flies past us next month, providing us with data to more precisely define its orbit around the sun."

For regular updates on passing asteroids, NASA has a list of the next five close approaches to Earth; it links to the [CNEOS website](#) with a complete list of recent and upcoming close approaches, as well as all other data on the orbits of known NEOs, so scientists and members of the media and public can track information on known objects.

More information: For more information on NASA's Planetary Defense Coordination Office, visit www.nasa.gov/planetarydefense

Provided by NASA

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