Small asteroid will fly by Earth tonight

When it makes pass, space rock will be just inside moon's orbit

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A small asteroid will buzz the Earth late Friday EDT, flying just inside the orbit of the moon. It should pass safely by our home planet, according to a crack team of NASA space rock trackers.

The space rock, named 2009 TM8, was just discovered Thursday by the Catalina Sky Survey in Arizona. It will get within 216,000 miles of Earth when it zooms by at a speed of about 18,163 mph.

"That's slightly closer than the orbit of our moon," NASA's **Asteroid Watch team** said Friday via Twitter.

The time of closest approach will be 11:44 p.m. EDT tonight.

The asteroid hunters at the Jet Propulsion Laboratory (JPL) in Pasadena, Calif., stands on constant watch for rogue space rocks that could pose an impact risk to Earth. It was the same team which, last week, scaled back the **risk of another asteroid** — a large space rock called Apophis — hitting the Earth in 2036.

Compared to Apophis, which is as large as two football fields, 2009 TM8 is tiny. It is about 30 feet across and was

discovered Thursday by skywatchers, JPL officials told SPACE.com.

Such close passes are not unheard of. With smaller objects, which are hard to find, announcements like this often come at the last minute. Researchers say there is a risk, however, of Earth eventually being **hit by an undetected small asteroid** that could cause heavy localized or even regional damage.

7 million objects near Earth So what would happen if an object like this did strike?

"If it's typical density, it would create a 4 kiloton explosion in the Earth's atmosphere if it were to hit, which of course it won't," said Don Yeomans, manager of the Near-Earth Object Program Office at JPL. "You'd expect an object of this size to fly within the orbit of the moon every few days or so."

Most simply aren't spotted.

"There're about 7 million of these objects in the near-Earth space; needless to say we have discovered only a small fraction of them." Yeomans said.

An asteroid this size can hit the Earth once every seven years or so, he said.

Professional and amateur skywatchers are expected to keep a close eye on 2009 TM8 over the next few days to refine its path through space. Additional observations will help

astronomers pin down the rock's entire track around the sun. "We'll have this orbit nailed within a couple days or so," Yeomans said.

While NASA tends to focus on **larger asteroid threats** and has found most of the big asteroid that could eventually threaten our planet, monitoring the smaller space rocks is also vital, Yeomans said. "They're sort of Mother Nature's way of shooting a few across the bow to make sure we pay attention."