Asteroid will miss Earth in September

Asteroid 2006 QV89, a space rock that'll pass closest to Earth on September 9, will not strike Earth. Since June, there've been numerous online articles focussing on the minuscule chance this asteroid might strike Earth in September. We're here to focus on the much, much, much greater chance this asteroid will not strike us. In fact, asteroid 2006 QV89 is currently classified by astronomers as NO HAZARD. It is not expected to hit Earth. In July, for example, in what astronomers said is "the first known case of ruling out an asteroid impact through a 'non-detection'," the European Space Agency (ESA) and the European Southern Observatory (ESO) concluded that this asteroid is not on a collision course with Earth in 2019 – and the chance of any future impact is also extremely remote.

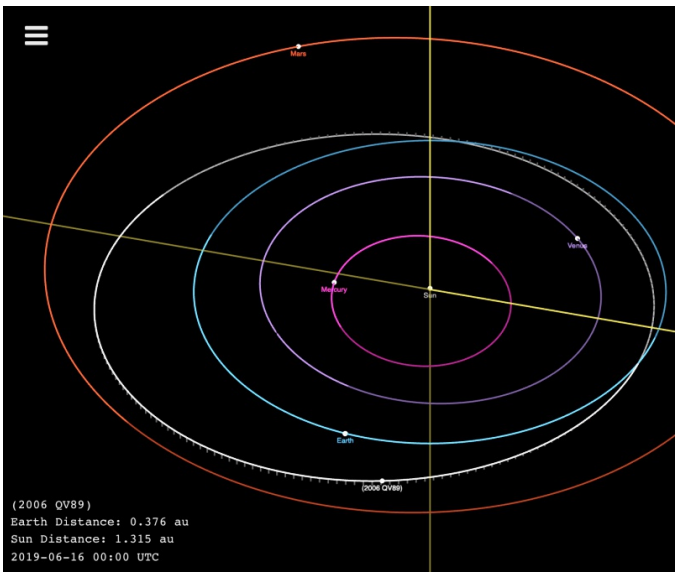
Next Earth close approach		
Date	2019/09/26	
Nominal distance (from Earth center)	0.04587	au
	6861695	km
Maximum Brightness	21.9	-

Risk
Object is in risk list
Object is not in priority list

This chart from the European Space Agency – published in June 2019 – shows the September 2019 distance of asteroid 2006 QV89 as 4,263,660 miles (6,861,695 km), or some 17 times the moon's distance. The object is in astronomers' "risk" category, but it's not on their "priority" list.

As of June 2019, calculations made by NASA/JPL with the available data suggest the space rock will not even have a particularly close approach to Earth in September 2019. According to NASA's Center for Near Earth Object Studies, 2006 QV89 will likely pass so far from our planet that there is a 99.989 percent chance the space rock will miss the Earth in September 2019.

Why the uproar about asteroid 2006 QV89 in the first place? The reason stems in part from the fact that this asteroid does appear on a "risk objects list" from the ESA, as do many other objects. In the case of asteroid 2006 QV89, it's important to note that the asteroid has a Torino Scale of 0, which indicates its no hazard status." list, but ESA currently classifies it as a non-priority risk



Viewed on this scale, from above the solar system, it looks as if the paths of Earth and asteroid 2006 QV89 intersect. Yet this asteroid's pass on September 9, 2019, shouldn't be a particularly close one. Image via NASA's Center for Near Earth Object Studies.

Many asteroids temporarily appear in a risk list due to uncertainties in their orbits. These sorts of uncertainties typically occur when an object has been recently discovered by observatories, and seen only during a few nights after the discovery, afterwards becaming too faint to observe. As an asteroid is re-observed – and astronomers' asteroid-orbit modeling programs recognize it as an asteroid previously detected – the incoming new observations let astronomers better refine its orbit. The Catalina Sky Survey in Arizona discovered 2006 QV89 on August 29, 2006. At that time, it had a very short (10-day) observation arc. The Arecibo Observatory made radar observations of this asteroid on September 6, 2006. Then, as it sped on, it was lost from view again and has not been detected since 2006.

From their brief observations of it – and from their knowledge of asteroids in general, which has grown dramatically in recent decades – astronomers can estimate that 2006 QV89 is about 98-131 feet (30-40 meters) in diameter, or about the length of an American football field. It's classified as an Apollo type asteroid, which are Earth-crossing asteroids, of which some 20,000 are known as of January 2019.

It is just a random asteroid, there are many in the table every year with dates that they 'could' hit, but they are classified as no hazard because they are all expected to miss. The press just picks up one of those many asteroids at random from time to time. It is just one of numerous NO HAZARD asteroids currently in the table. AK, with EarthSky and Wikipedia Notes