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## solar system



PAT RAWLINGS

# What Makes An Asteroid Threatening to Earth?

By Michael Paine  
Special to SPACE.com  
posted: 12:30 pm ET  
18 September 2000

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[Asteroids](#) are space rocks. Most are well-behaved and orbit our sun in a region between Mars and Jupiter -- the Asteroid Belt.

Some, however, are [misbehaved](#) and spend some of their time in Earth's region of the solar system. These are the ones that worry astronomers because they could collide with our planet.

None are known to be on a collision course but there are more than 100,000 near-Earth asteroids that are large enough (100 yards, or 91 meters, in diameter) to cause an explosion greater than the largest hydrogen bomb ever made. The chances of one of these hitting Earth in the next century are about one in 10.

Fortunately, it now seems that most will buzz Earth several times before impact and, in these circumstances, even the small ones should be easy to spot. This means that a full-scale diligent "Spaceguard" [search program](#), as proposed by the British Task Force, should provide decades of warning -- sufficient time to take evasive action

Although comets are sometimes described as giant dirty snowballs they can pack a punch if they hit Earth. They usually come from the outer reaches of the solar system. Comets pick up speed as they plunge toward the sun and can collide with Earth at an incredible 150,000 miles (241,400 kilometers) per hour. Hazardous comets are more difficult to detect than asteroids because of their speed, and distance.

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