Asteroid to rock the night sky next week

2005 YU55 to make 'spectacular' display

By Dan Vergano
USA TODAY

A close encounter of the harmless kind comes next Tuesday when an aircraft-carrier-size asteroid races past Earth.

The asteroid, dubbed 2005 YU55, will come within 202,000 miles of Earth, closer than the moon, before zipping farther into space. Carbon-colored and dark, the asteroid measures some 1,300 feet wide. It will be the closest visit by a space rock this size in more than three decades.

"This is not a potentially hazardous asteroid, just a good opportunity to study one," says National Science Foundation astronomer Thomas Statler. NASA and the NSF plan a series of radar telescope and other observations starting Friday, aimed at mapping the asteroid's surface and chemistry.

"The radar measurements should be pretty spectacular," Statler says.

"A lot of asteroids are out there, so the more we know about them, the better," says astronomer Phil Plait of *Discover Magazine*'s BadAstronomer blog. "This one is a clean miss, but we are going to learn a lot of science from it passing by."

In July, NASA's Dawn mission went into orbit around the 330-mile-wide asteroid Vesta in the asteroid belt between Mars and Jupiter. "Right now is a pretty good time to be an asteroid scientist," Plait says.

Strangers in the night

Pack a telescope if you want to exchange glances with the asteroid crossing our path next week. Barring clouds, U.S. skywatchers will see asteroid 2005 YU55 zip past the bright star Altair about 5:30 p.m. ET on Nov. 8. The space rock heads into the constellation Pegasus by 1 a.m. ET.



Source: Sky and Telescope magazine

By Frank Pompa and Janet Loehrke, USA TODAY

An asteroid similar in size to 2005 YU55 won't come this close to Earth again until 2028. Some 1,262 "potentially hazardous" asteroids, ones larger than 500 feet across, circle the sun in Earth's neighborhood, according to NASA. Asteroid 2005 YU55 (the name indicates it was found in late December of 2005) is one of them, but it stands no chance of hitting Earth, at least for this century. It comes closest, within about 167,000 miles, in 2094, based on where it's likely to cross Earth's path on its elongated, 446-day orbit around the sun.

"We want to study these asteroids so if one does look like it may hit us someday, we'll know what to do about it," Statler says.

An asteroid of 2005 YU55's size landing in the ocean would trigger a magnitude-7.0 earthquake and 70-foot-high tsunami waves some 60 miles away, says Jay Melosh of Purdue University in Indiana. Such impacts are thought to come about once every 100,000 years.

Asteroid 2005 YU55 is in the common but little understood "C" class of asteroids, extremely porous carbon-colored objects, says Don Yeomans, NASA asteroid expert.