



APOCALYPSE LATER

NASA scientists plan for a possible date with Apophis

BY ARANYA TOMSETH

adds to the ominous nature of the prediction. Don Yeomans, senior research scientist at Jet Propulsion Laboratory (JPL) and supervisor of JPL's Solar System Dynamics Group, says Apophis will come within five Earth radii of our surface – closer than some satellites are. It will be briefly visible before it makes a quick exit, but there's a chance it could pass into a 600-meter-wide area that scientists dub a “keyhole in space.” If it does, then Yeomans says there is a “remote” possibility that it will make a return visit and strike Earth exactly seven years later, on Sunday, April 13, 2036.

But how does one plan for an asteroid impact anyway? Wet naps? Although Apophis – which is roughly the size of three NFL football fields – would not decimate all life on Earth, it's strong enough to destroy an area the size of Kansas. The asteroid would have an impact energy of 500 megatons – compare that with the average nuclear weapon, a measly 3 megatons. Doh!

Still, NASA maintains that death-by-asteroid fears are unfounded. Yeomans says there are numerous reasons why the odds of Apophis hitting earth are slim to none. It's rare an asteroid this gargantuan passes so close to our planet. Yeomans noted that Earth gets hit with “basketball-

sized objects” two to three times a month, and “Volkswagen-sized objects,” once or twice every year.

But in April 2008, one bally German boy, 13-year-old Nico Marquardt, used telescopic findings from the Astrophysical Institute Potsdam to come up with calculations that put the odds of Apophis at a frightening 1 in 450. Marquardt has been featured in numerous international news articles and online blogs, where he claimed that NASA failed to take into account the fact that Apophis might collide with one of the 40,000 satellites currently orbiting Earth. This Doogie-Howser-of-doom's credentials are murky, and Yeomans says he had all of his information wrong and “didn't know what he was talking about.” Still, the gutsy teen made enough of an impression that NASA had to put out an official press release refuting Marquardt's findings.

Lederhosen-wearing tweens aren't the only ones worried about this Earth crusher. In 2007, The Planetary Society sponsored the Apophis Mission Design Competition, where teams created a workable plan for rendezvousing with Aphophis and tagging it with cameras and radio transmitters. Yeomans says the proposed strategies from the various teams could be used in the future, and advancing technology will only improve NASA's asteroid-monitoring capabilities. Yeomans also proposed a more blunt solution. “If we had a problem, we would deflect [the asteroid] simply by running into it with a spacecraft.” Phew. Eat spaceship, Apophis. Eat spaceship.

April 13, 2036 could turn out to be a bad day for the unlucky inhabitants of Earth. Like, really bad. Scientists have estimated that there is an approximately 1 in 45,000 chance that the nearly 900-foot asteroid known as “Apophis” could smash into our planet. No worries, you say? Well, there is a greater likelihood that Apophis will make its appointed doomsday date with Earth than there is of you scoring millions of dollars off your most recent lottery ticket – and as we all know, people do in fact hit the jackpot from time to time.

Apophis first caused a ruckus in December 2004, when NASA calculated that the asteroid would pass unusually close to Earth on Friday, April 13, 2029, and of course, the whole Friday-the-13th stamp only