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December 13, 2006. Apophis is an approximately 400 meter near-Earth object (NEO), which will come closer to Earth in 2029 than the orbit of our geostationary satellites. On that pass, the asteroid will be gravitationally perturbed to an unknown orbit, one that could cause it to hit Earth in 2036. Earth objects (NEOs), which will come closer to Earth in 50 years, they are not zero, and Apophis and other NEOs represent threats that need to be addressed," said Emily Schweickart, Apollo program, head of the Association for Space Explorers NEO committee. Bruce Betts, The Planetary Society's Director of Projects said, "With this competition, we hope not only to generate creative thinking about tagging Apophis, but also to stimulate greater awareness of the broader near-Earth object threat."

Very precise tracking may be needed to determine the probability of a collision in 2036. Such precise tracking may require "tagging" the asteroid, perhaps with a beacon - a transponder or reflector - or some other method. Exactly how an asteroid could best be tagged is not yet known, not to a obvious. "Learning how to do this in the past of the competition," added Betts.

The Planetary Society is "hoping" \$50,000 that someone will derive an innovative solution to the problem. The prize money was contributed and competition made possible by Dan Garics, a member of The Planetary Society Board of Directors, together with donations from Planetary Society members around the world. Garics stated, "The time scale may be unknown, but the danger of a near-Earth object impact is very real. We need to open the space community and indeed all people into thinking about technical solutions."

The Planetary Society is conducting this competition in cooperation with the European Space Agency (ESA), NASA, the Association of Space Explorers (ASE), the American Institute of Aeronautics and Astronautics (AIAA), and the Universities Space Research Association (USRA). The Society will present the winning entries to the world's major space agencies, and the findings of the contest if Apophis passes through a second hazardous

near side "flyby" in 2029, it will impact Earth in 2036. While current estimates rate the probability of impact as very low, Apophis is being used as an example to enable design of a broader type of mission to any potentially dangerous asteroid.

The competition design scenario asks participants to imagine that Earth-based observations of Apophis made over the coming years are not sufficient to know whether the asteroid will or will not pass through the 2029 keyhole, and that a better orbit determination is needed to know if a deflection mission is required. The competition requires that the tagging mission be designed to return information fast enough so that by the year 2017 space agencies could detect

