Astronomers monitor asteroid to pass near Mars

by Bend_Weekly_News_Sources

WASHINGTON - Astronomers funded by NASA are monitoring the trajectory of an asteroid estimated to be 164-feet wide that is expected to cross Mars' orbital path early this year. Observations provided by the astronomers and analyzed by NASA's Near-Earth Object Office at the Jet Propulsion Laboratory in Pasadena, Calif., indicate the object may pass within 30,000 miles of Mars at about 6 a.m. EST on Jan. 30, 2008.

Asteroid 2007 WD5

"Right now asteroid 2007 WD5 is about half-way between the Earth and Mars and closing the distance at a speed of about 27,900 miles per hour," said Don Yeomans, manager of the Near Earth Object Office at JPL. "Over the next three weeks, we hope to gather more information from observatories so we can further refine the asteroid's trajectory."NASA detects and tracks asteroids and comets passing close to Earth. The Near Earth Object Observation Program, commonly called "Spaceguard," plots the orbits of these objects to determine if any could be potentially hazardous to our planet. Asteroid 2007 WD5 was first discovered on Nov. 20, 2007, by the NASA-funded Catalina Sky Survey and put on a "watch list" because its orbit passes near the Earth. Further observations from both the NASA-funded Spacewatch at Kitt Peak, Ariz., and the Magdalena Ridge Observatory in New Mexico gave scientists enough data to determine that the asteroid was not a danger to Earth, but could potentially impact Mars. This makes it a member of an interesting class of small objects that are both Near Earth Objects and â€œMars crossers."Because of current uncertainties about the asteroid's exact orbit, there is a 1-in-75 chance of 2007 WD5 impacting Mars. If this unlikely event were to occur, it would be somewhere within a broad swath across the planet north of where the Opportunity rover is."We estimate such impacts occur on Mars every thousand years or so," said Steve Chesley, a scientist at JPL. "If 2007 WD5 were to thump Mars on Jan. 30, we calculate it would hit at about 30,000 miles per hour and might create a crater more than half-a-mile wide." The Mars Rover Opportunity is currently exploring a crater approximately this size.Such a collision could release about three megatons of energy. Scientists believe an event of comparable magnitude occurred here on Earth in 1908 in Tunguska, Siberia, but no crater was created. The object was disintegrated by Earthâ€™s thicker atmosphere before it hit the ground, although the air blast devastated a large area of unpopulated forest.