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RESPONDING TO THE THREAT OF POTENTIALLY-HAZARDOUS NEAR EARTH OBJECTS

**Abstract**

The record of history, as written in the many impact craters on Earth and the moon, demonstrate that it is just a matter of time before astronomers discover a near Earth object (NEO) headed toward a collision with Earth. As the 1908 Tunguska event which leveled trees across an area of Siberia some 30 km in diameter demonstrated, even relatively small objects (30-50 m diameter) are capable of inflicting enormous damage. When such an event occurs, how should we respond? Who should respond? What can the world do to prepare for this eventuality? The uncertainties connected with predicting the impact point and amount of damage lead to the conclusion that any response would have to be an international one. A recent report by the Association of Space Explorers (ASE) makes the explicit recommendation that three functional groups be set up to respond to such an eventuality: An Information Analysis and Warning Network (IAWN) to recommend the potential response from the warning and characterization of an impending impact; A Mission Planning and Operations Group (MPOG) of agencies from space faring States to carry out the recommendation; and an Intergovernmental Mission Authorization and Oversight Group (MAOG) to authorize action if a potentially hazardous NEO is discovered.

In 2001, following the recommendations of UNISPACE III, the United Nations Committee on the Peaceful Use of Outer Space (COPUOS) set up an Action Team (AT-14) to examine scientific and technical matters related to NEOs. As a result of the work of AT-14, in 2009, COPUOS agreed to a three-year work plan to develop recommendations for international response to the near-Earth object impact threat. This paper presents the results of a workshop in support of the work of AT-14 that was held in January 2010 in Mexico City.