Association of Space Explorers

Committee on Near Earth Objects

Statement by the Association of Space Explorers
Committee on the Peaceful Uses of Outer Space
Science and Technical Subcommittee
Vienna, Austria
15 Feb 13

Thank you, Mr. Chairman. I am Tom Jones, a member of the Association of Space Explorers and current Chairman of the Association's Committee on Near-Earth Objects. Like my orbiting colleague Chris Hadfield, I wish to thank you and the COPUOS members and delegates here for recent progress in dealing with the global hazard posed by a damaging impact from a Near-Earth Object. We urge the COPUOS through its members to match encouraging scientific work with adoption of an effective international plan to prevent such an impact.

Our Association of space fliers has as a core mission to work to preserve Earth's life-sustaining environment, and that responsibility includes action to prevent a future damaging cosmic impact. In 2008 the Association submitted to the Committee on the Peaceful Uses of Outer Space its report, "Asteroid Threats: A Call for Global Response," encouraging the United Nations to work with its members, through the COPUOS, to organize an effective international strategy for dealing with the impact hazard.

We have been very pleased over the past five years to see several of the fundamental recommendations in our report considered by the Science and Technical Subcommittee's NEO Working Group, through its Action Team 14. Progress has been good, and the member states of the NEO Working Group through their space agencies now effectively share discovery and orbit information on possible asteroid threats, and are moving to form a space mission advisory group to recommend effective means of tracking and deflecting these objects.

As Chris Hadfield noted in his message from the International Space Station, the close flyby this evening of asteroid 2012 DA14 offers a solid reminder of the swarm of objects our planet may encounter in its orbit around the Sun. DA14 also offers a valuable opportunity to learn more about small asteroid physical properties and behavior. The discovery, subsequent tracking, and prediction of DA14's close approach is a significant demonstration of international cooperation, a capacity that will be tested again and again as many more asteroids are discovered in the decades ahead.

The Association applauds the growth in scientific knowledge about asteroids obtained by the research programs and flight missions of the world's space agencies. The U.S.

Dawn spacecraft has finished its work at asteroid Vesta, and NASA has sent it on to the largest asteroid, Ceres. ESA's Rosetta spacecraft will arrive at the 4-km-wide comet 67P/Churyumov-Gerasimenko in 2014 and examine its surface in detail. Both NASA and Japan's JAXA are planning ambitious asteroid sample return missions. The prospects for future cooperative efforts on potentially threatening objects are very good.

The fundamental first step in enabling an effective response to a future impact threat is a comprehensive telescope survey to find the many other small asteroids, like 2012 DA14, capable of a damaging collision with Earth. We commend NASA's long-running search and prediction efforts and complementary work done in Europe and by other observers.

Our report noted the need for more sensitive, far-reaching asteroid surveys, so our Association is encouraged that new ground-based telescopes are coming online. More resources can only speed this search effort; some may come from philanthropic organizations like the B612 Foundation, developing the Sentinel space-based search telescope. Two of B612's founders are veteran space fliers and members of our Association.

Search efforts enable productive ground- and space-based research into the nature and properties of asteroids, and how best to deflect hazardous ones. Through COPUOS, member states and their space agencies are increasingly cooperating in asteroid research, as in the surveys and scientific missions we will shortly hear about from the U.S., the European Union, Japan, and others.

We are very pleased to note the European Commission's initiative to facilitate and fund the NEOShield Project. We think this type of work is vital in preparing techniques for preventing NEO impacts and hope that similar work can continue to be funded on a long-term basis. Complementary efforts and provision of adequate resources by other space agencies will ensure we obtain the timely knowledge necessary for an effective deflection campaign.

Cooperative research will expand our scientific understanding of these ancient relics of our solar system formation, and benefit humanity through further human space exploration and through access to valuable asteroid resources. Equally important is the adoption here of an effective international impact prevention plan. If we succeed, we will for the first time be able to eliminate the threat from a hazard as old as our solar system. Our work together here can help us realize the most important benefit to come from 21st Century space research -- ensuring humanity's survival.

Thank you.

Thomas D. Jones, PhD