26th IAA SYMPOSIUM ON SPACE AND SOCIETY (E5)
Space Assets and Disaster Management (5)

Author: Dr. James Burke
The Planetary Society, United States

Mr. Daniel Brack
Asher Space Research Institute (ASRI), Israel
Dr. Iole De Angelis
French Ministry of Defense, France

# SPACE ASSETS FOR MITIGATING AND MANAGING IMPACT DISASTERS

**Abstract**

Asteroid or comet impacts on Earth are now recognized as a class of disasters that may be avoided or, if that were to be impossible, mitigated with the help of space assets. More and more people and institutions, including IAA, have become involved but as yet there is no agreed, coordinated and funded multinational response. In this paper we describe the present state of knowledge and developments and advocate vigorous international actions, beginning with organization and assignment of tasks and extending more ambitiously into the future, that can improve preparedness for both escaping and recovering from impact events. A companion IAC paper will present the results of a Planetary Defense Team Project to be carried out at the summer 2015 session of the International Space University. The first need is for wider understanding of the threat to promote allocation of both public and private resources in competition with other priorities. Existing programs and future prospects for finding and evaluating Potentially Hazardous Objects (PHO) need to be publicized globally because a devastating impact can happen to any population and every population, with or without space assets, can prepare for survival and recovery. The next need, already the subject of some research, is to begin development of practical means for diverting or neutralizing PHO. This need could become urgent at any time. Prior study of solutions, including policy on dual-use military space technology, could aid choices in the sudden onset of an existential threat to humanity. Since both management decisions and technical methods have long lead times, work should begin on them now. Space assets, including preparations for emergency communications and launch on demand, should be included in international planning. In addition, people should be persuaded that robust civil-defense preparations are useful in any disaster. Caches of essential recovery supplies and knowledge should be emplaced worldwide and eventually augmented by a retrievable archive of vital information on the Moon.

Related IAA studies: S3.5, SG3.20, SG4.9, SG5.13, IAA PDC 2015