

PDC2013  
Flagstaff, AZ, USA

IAA-PDC13-06-03

- Planetary Defense – Recent Progress & Plans
- NEO Discovery
- NEO Characterization
- Mitigation Techniques & Missions
- Impact Effects that Inform Warning, Mitigation & Costs
- XX  Consequence Management & Education

## ASSESSING THE FULL SPECTRUM OF COMMUNICATION NEEDS FOR POTENTIALLY HAZARDOUS NEOs

**Margaret S. Race**

*SETI Institute, 189 Bernardo Ave, Mountain View CA 94549  
(925) 890-3963, [mrace@seti.org](mailto:mrace@seti.org)*

**Keywords:** *Risk Communication, NEOs, Asteroid Impacts, Crisis Management*

### ABSTRACT

For the past two decades, the NEO community has concentrated mainly on evaluation of scientific, technical and infrastructure needs in anticipation of the risks posed by hazardous NEO's. More recently, attention also has been focused on international decision making in advance of threatening objects, as well as early simulation exercises to evaluate potential responses to different scenarios. At this point, it is advisable to draw lessons learned from the extensive disaster and crisis management literature in order to evaluate more fully what is needed for risk communication at various times periods and for different audiences in response to NEO threats. Presumably, communication among astronomers, mission planners, and international policy makers will continue to be addressed as part of expert communities in their deliberations about detection, deflection and decision related to NEO threats. The public risk communication, however, will need special attention, in part because the features of NEO threats are at the extremes of awareness-- with perception and understanding far less than most other hazard and risk communication efforts.

Risk communication about NEO's is complicated by several things: scant public awareness of low probability but potentially devastating events, complete unfamiliarity with possible precautionary plans or actions for NEOs, and the expansive, potentially global nature of the threat. The long time frames between pre-impact monitoring and complex decision-making about deflection, combined with uncertainty associated with impact warnings, and the total lack of information about post-impact recovery represent challenges in attempts to plan useful communication strategies. In addition, communication will likely be complicated by scientific vs. supernatural or apocalyptic interpretations of NEOs, differences in cultural and political views, and questions about *who* should be in charge of taking proactive

steps for protecting lives and minimizing collective losses. Thus, NEOs represent interesting case studies for analyzing unusual aspects of hazard and risk communication—from basic education about the hazard and its unfamiliar risks, to identification of anticipated gaps or problems in communication at various stages (e.g., preparedness, warnings, dissemination of public safety advice, etc.). In addition to considering what information should be communicated, it will also be important to anticipate who will communicate, at what points in time, and what channels of communication will be involved, including formal and informal education institutions, national and international government officials, traditional media outlets, the internet and social media.

This presentation dissects planning and response preparedness for NEO threats, and identifies particular public communication needs that will require special research and attention at different stages of the threat. Although asteroid hazards may be perceived by many as akin to science fiction, it is advisable to begin now to develop plans for public communication based on the well-established foundations of research from the risk management and risk communication communities.