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

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**NOT JUST “ROCKS FROM SPACE”: COMMUNICATING THE CONCEPTUAL
FOUNDATIONS OF THE NEO HAZARD TO NON-SCIENCE PROFESSIONALS
THROUGH SHORT VIDEOS**

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ABSTRACT

Professionals across a wide range of fields, including policy, diplomacy, security, defense, and emergency management, are engaged in the discussion of NEO hazards and risk mitigation. Many of these people have not previously had the need for the foundational knowledge in astronomy and space science that underlies the issues they are now confronting. Unfortunately, most multimedia materials on the subject, particularly those produced for commercial broadcast, emphasize the dramatic aspects of the NEO hazard and the spectacular consequences of an impact, and de-emphasize the conceptual background. With the needs of these professionals in mind, I have produced a series of short (approximately 5 minutes) pedagogical videos, titled “Asteroid Hazards: The View from Space”. These videos introduce the time-constrained viewer to the key aspects of orbital dynamics, NEO observation, and impact prediction. They incorporate accurately computed planetary and NEO orbits into computer-generated animations, which use strategically choreographed rotations and fly-arounds to help the viewer develop a 3-dimensional perspective. While avoiding formal mathematics, they make use of correct quantitative concepts in order to encourage an intuitive understanding of the spatial and temporal scales. In their current form, the videos emphasize content and accuracy and are limited in visual effects owing to the single-person production team. The early chapters have been shown to selected audiences of planetary scientists, policy professionals, amateur astronomers, and the general public for comments. The feedback received so far highlights important issues for all types of scientific communication to the public, including visual appeal the need for “trust agents”. This feedback will inform plans for enhancing the series.