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**AOPHIS AS THE DEMON SERPENT OF DARKNESS: DESIGNING
COMMUNICATION PROTOCOLS FOR MISINFORMATION AND CONSPIRACY
THEORIES IN PLANETARY DEFENSE**

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ABSTRACT

Potentially Hazardous Asteroid (99942) Apophis will fly past Earth at an unprecedented distance on Friday, April 13, 2029. Despite its ominous name which refers to a serpent of chaos and evil in Egyptian mythology, we know with certainty that Apophis poses no threat to humanity during this encounter, and confidently assess that it even poses no threat for the next century [1]. This presentation argues that the Apophis event will not only provide an opportunity to educate people about planetary defense broadly, but that Apophis should also serve as a test case for stakeholders to confront the inevitable misinformation and conspiracy theories that surround planetary defense.

In March 2022, NASA, FEMA, and planetary defense experts conducted a simulation wherein a Near Earth Object would strike Winston Salem, North Carolina. The results highlight the urgency for the planetary defense community to design protocols to deal with misinformation and conspiracy theories. According to August Vernon, the Winston-Salem emergency management director, when it came to simulating an evacuation, "...20 percent of people would not leave because it was all fake news or the government was lying or some other reason" [2]. This presentation will review a set of communication strategies designed to anticipate, confront, and reduce the power of misinformation related to planetary defense. The goal of the presentation is to persuade stakeholders to use the Apophis event as an opportunity to establish communication protocols related so the planetary defense community can be proactive rather than reactive when misinformation and conspiracy theories inevitably enter the public discourse.

References:

- [1] Farnocchia, D., & Chesley, S. R. (2022). Apophis Trajectory, Impact Hazard, and Sensitivity to Spacecraft Contact. *LPI Contributions*, 2681, 2007.
- [2] Brady, M. (2022, November 4). *NASA asteroid threat practice drill shows we're not ready*. Scientific American. Retrieved December 23, 2022, from <https://www.scientificamerican.com/article/nasa-asteroid-threat-practice-drill-shows-were-not-ready>

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