

Hypothetical Asteroid Threat Exercise  
Earth Impact Effects & Consequences

## The effect of prior knowledge on planetary defense scenario risk assessments

Jessie Dotson<sup>a,\*</sup>, Lorien Wheeler<sup>b</sup>, Ashley Coates<sup>b</sup>

<sup>a</sup>NASA Ames Research Center, MS245-6, Moffet Field, CA, 94035, USA

<sup>b</sup>NASA Ames Research Center, MS 258-2, Moffett Field, CA, 94035, USA

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In planetary defense scenarios, there is often a limited amount of information about the properties of the object during the early phases. Statistical inference methods which leverage prior knowledge about the population of Near Earth Asteroids have successfully been utilized in PDC and IAWN exercises to augment the available measurements about the specific hypothetical impactor. The physical properties inferred by combining prior knowledge and available measurements have been used to assess the risk due to impact. In this paper we will examine how the details of the prior knowledge used in the statistical inference of physical properties effects the outcome of scenario risk assessments.

**Comments:**

*Oral Presentation is preferred*

### References

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\*Corresponding author

*Email addresses:* [jessie.dotson@nasa.gov](mailto:jessie.dotson@nasa.gov) (Jessie Dotson), [lorien.wheeler@nasa.gov](mailto:lorien.wheeler@nasa.gov) (Lorien Wheeler), [ashley.m.coates@nasa.gov](mailto:ashley.m.coates@nasa.gov) (Ashley Coates)