

Accepted Manuscript

Creep stability of the proposed AIDA mission target 65803 Didymos:
I. Discrete cohesionless granular physics model

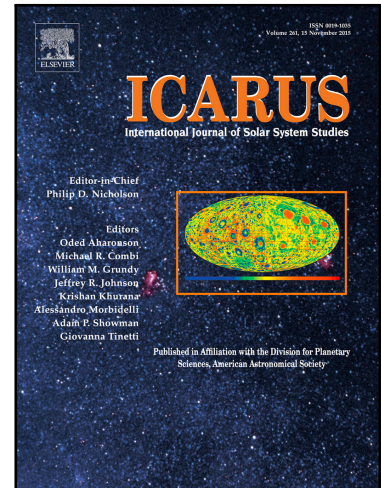
Yun Zhang , Derek C. Richardson , Olivier S. Barnouin ,
Clara Maurel , Patrick Michel , Stephen R. Schwartz ,
Ronald-Louis Ballouz , Lance A.M. Benner , Shantanu P. Naidu ,
Junfeng Li

PII: S0019-1035(16)30530-9
DOI: [10.1016/j.icarus.2017.04.027](https://doi.org/10.1016/j.icarus.2017.04.027)
Reference: YICAR 12452

To appear in: *Icarus*

Received date: 25 August 2016
Revised date: 23 April 2017
Accepted date: 26 April 2017

Please cite this article as: Yun Zhang , Derek C. Richardson , Olivier S. Barnouin , Clara Maurel , Patrick Michel , Stephen R. Schwartz , Ronald-Louis Ballouz , Lance A.M. Benner , Shantanu P. Naidu , Junfeng Li , Creep stability of the proposed AIDA mission target 65803 Didymos: I. Discrete cohesionless granular physics model, *Icarus* (2017), doi: [10.1016/j.icarus.2017.04.027](https://doi.org/10.1016/j.icarus.2017.04.027)



This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Highlights

- We simulate the slow spin-up of Didymos using rubble-pile models with different material and internal configurations.
- The failure mode of a rubble pile depends mainly on the arrangement and size distribution of its constituent particles.
- The Didymos primary in certain configurations can remain geo-statically stable at a bulk density ≥ 2.4 g/cc without requiring cohesion.

ACCEPTED MANUSCRIPT

Download English Version:

<https://daneshyari.com/en/article/5487384>

Download Persian Version:

<https://daneshyari.com/article/5487384>

[Daneshyari.com](https://daneshyari.com)