



EPSC Abstracts

Vol. 14, EPSC2020-176, 2020

<https://doi.org/10.5194/epsc2020-176>

Europlanet Science Congress 2020

© Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



Nano to Mini satellite and dedicated instruments: a new opportunity for planetary exploration

Hannah Goldberg¹, Stefaan Van wal¹, Alain Herique², Yves Rogez², Ozgur Karatekin³, and Victor Manuel Moreno Villa⁴

¹GomSpace, Engineering, Aalborg Øst, Denmark (hrg@gomspace.com)

²IPAG, University of Grenoble - Alpes, France

³Royal Observatory of Belgium, Belgium

⁴GMV, Spain

Large planetary science missions carry a suite of instruments that must negotiate observations and priorities to fulfill their scientific objectives. A new paradigm of mission brings use of deployable nano-spacecraft as independent operating observers to provide added science. As in the case of the Hera mission, the Hera mothercraft will carry through the cruise phase two small CubeSats and deploy them once in the vicinity of the Didymos asteroid system. These small CubeSats are able to navigate relative to the observing planetary body and conduct meaningful science through 1-2 miniaturized instruments.

The Juventas CubeSat for Hera will be discussed along with presentation of its low frequency radar, JuRa. Its scientific objectives and contribution to the Hera and AIDA objectives will be presented.