PDC2023

Vienna, Austria

THE DIDYMOS SYSTEM CHARACTERIZATION CAMPAIGN IN SUPPORT OF THE DOUBLE ASTEROID REDIRECTION TEST

A. S. Rivkin [(1)], C. A. Thomas [(2)], S. Ieva[(3)], D. Polishook[(4)], J. de León [(5)], E. S. Howell[(6)], M. Lazzarin[(7)], S. F. Green[(8)], B. Rozitis[(8)], F. La Forgia[(7)], A. Migliorini[(9)], and the DART Observations Working Group

[(1)]Johns Hopkins Applied Physics Laboratory, Laurel MD, USA, andy.rivkin@jhuapl.edu;
[(2)]Northern Arizona University, Flagstaff AZ, USA; [(3))]INAF - Osservatorio Astronomico di Roma, Roma, Italy; [(4)]Weizmann Institute, Rehovot, Israel; [(5)]Instituto de Astrofisica de Canarias, Santa Cruz de Tenerife, Spain; [(6)]University of Arizona, Tucson AZ, USA; [(7)] University of Padova, Padova, Italy; [(8)]The Open University, Milton Keynes, UK; [(9)]INAF-IAPS, Roma, Italy;

Keywords: *NEO, spectroscopy, kinetic impactor, DART, Didymos*

ABSTRACT

The fall of 2022 saw the Didymos binary asteroid system make its closest approach to Earth since 2003 and until 2062. This close approach was not only one of the strongest motivators for the timing of the DART mission, but it also provided an opportunity for an observational campaign devoted to characterizing the spectral, thermal, and physical properties of the system in support of DART.

The DART characterization campaign complemented observational campaigns devoted to determining the binary period change caused by the DART impact and a campaign dedicated to observing the evolution of the ejecta cloud. Characterization observations covered wavelengths from the visible to the mid-infrared, and were carried out from both groundbased and spaceborne observatories.

We will discuss the measurements taken through this campaign and synthesize the results.

****

Comments:

Preferred poster contribution.