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Planetary Defense from Asteroids and Comets (1)

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KEYNOTE: DART: LATEST RESULTS FROM THE DIMORPHOS IMPACT AND A LOOK FORWARD TO FUTURE PLANETARY DEFENSE INITIATIVES

Abstract

DART, the Double Asteroid Redirection Test, successfully impacted asteroid Dimorphos on September 26, 2022, becoming the first mission to demonstrate asteroid deflection. Shared live via a NASA broadcast, over a million concurrent viewers around the world watched as the DART spacecraft streamed images to Earth up to the final second before its impact with Dimorphos. In this talk, we will share with the audience the final phases of the DART encounter and the latest results from the DART Investigation Team's analysis of ground and space-based data. This includes measurements on the amount of deflection that DART imparted on Dimorphos, a determination of the momentum transfer enhancement factor, and results on understanding the geology and surface characteristics of the impact site.

The success of the DART mission paves the future for a bold international Planetary Defense program. We will share ideas on bolstering international coordination, developing new technologies that can mitigate different types of asteroid threats, and closing identified gaps in our overall preparedness.