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HyperScout-H: The Hyperspectral Imager for ESA - Hera Mission

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The HyperScout-H (HS-H) instrument is one of the payloads aboard ESA's Hera spacecraft. Hera is a planetary defence mission that aims to provide detailed characterization of the near-Earth binary asteroid (65803) Didymos - Dimorphos following the NASA DART planed impact. HS-H is a dual-use payload that captures both images and spectral data within the 0.65–0.95 µm wavelength range. Observations from this instrument will offer key insights into the composition, space weathering effects, and the potential presence of exogenous material on the Didymos–Dimorphos system. Thanks to its wide field of view (15.5° × 8.3°), HS-H will be able to monitor the system's orbital dynamics and dust environment, with both components of the binary asteroid remaining in the field of view for most of the asteroid phase of the mission.
The ESA Hera mission was launched on October 7, 2024, and is expected to arrive at its target by the end of 2026. During the commissioning phase, three days after launch, HyperScout-H obtained images of the Earth–Moon system. Later, during the Mars flyby (on March 12, 2025), additional images were acquired featuring Mars and its two moons. Calibration images are regularly scheduled throughout the cruise phase, prior to arrival at the asteroid.
In this talk, I will present the instrument's functionality and discuss the images acquired during the in-flight phase.

Primary authors: NAGY, Balázs; GRIEGER, Björn; PRODAN, George Pantelimon; KOVÁCS, Gábor; PETRIȘOR, Iulian; DE LEON, Julia; POPESCU, Marcel (University of Craiova); PREDATU, Marian; KÜPPERS, Michael

Presenter: POPESCU, Marcel (University of Craiova)

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