Contribution ID: **15** Type: **Oral**

HERMES Pathfinder

Monday 12 May 2025 18:10 (25 minutes)

HERMES Pathfinder is scheduled for launch on March 6th 2025 on board Space X Transporter 13. The commissioning phase will then start as soon as the six 3U CubeSat will be deployed from D-Orbit ION space tug, starting from one week after the launch. HERMES Pathfinder is an in-orbit demonstration to prove that high energy cosmic transients such as Gamma Ray Bursts can be efficiently detected by miniatured hardware. The three main characteristics of the payload and the mission architecture are: 1) very broad energy band, from a few keV to a few MeV, allowing detection of both hard-short GRB and high redshift GRB; 2) exquisite temporal resolution, down to a fraction of microsecond, allowing to open the sub-millisecond variability window for bright bursts; 3) localization capabilities at the level of a few degrees for highly variable GRBs using the triangularization technique. I will present a progress report focusing the discussion on early results from the commissioning phase and the scientific innovation of the project. I will finally discuss the prospects of applying similar distributed architectures for the creation of an observatory with the ability to cover the entire high-energy sky at all times to search for the high-energy counterparts of gravitational wave events that will be find by Advanced Ligo/Virgo/Kagra at the end of this decade and by the Einstein Telescope during the 2030s.

Eligibility for ”Best presentation for young researcher” or ”Best poster for young researcher” prize

No

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Session Classification: Institutionals and Highlights