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## The LEM-X all-sky monitor: first results of the detector prototype

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The *Lunar Electromagnetic Monitor in X-rays* (LEM-X) is a proposed all-sky X-ray observatory to be installed on the surface of the Moon for the rapid identification of high-energy transients and the long-term monitoring of astrophysical sources in the 2 – 50 keV band. Developed within the *Earth Moon Mars* (EMM) project of the Italian National Recovery and Resilience Plan, LEM-X has been conceived as a fully modular structure. Its building block is a compact and lightweight 2-sr field-of-view coded-mask camera, featuring four Detector Assemblies (DAs), each one built around a large-area linear Silicon Drift Detector (SDD), read out by 22 analog front-end Application Specific Integrated Circuits (ASICs), specifically developed for this project and named NOVA. Each DA has single-photon sensitivity and both spectral and imaging capabilities. We will report on the status of the project as well as the first experimental results on the breadboard of the DA, equipped with a 64-anode prototype SDD and 2 NOVA ASICs.

### Eligibility for "Best presentation for young researcher" or "Best poster for young researcher" prize

No

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