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## **eXTP Large Area Detector: qualification procedure of the mass production**

*Monday, 23 May 2022 15:38 (1 minute)*

A  $7.25 \times 12.04 \text{ cm}^2$  Silicon Drift Detector (SDD) has been developed for the enhanced X-Ray Timing and Polarimetry (eXTP) mission of the Chinese Academy of Science, with a large contribution by a European consortium inherited from the ESA-M3 LOFT mission study. In the frame of the project X-Ray Observatories (XRO), active in the National Scientific Commission 2 of the INFN, we report the details of the qualification procedure to select from the mass production the 640 detectors that will equip the Large Area Detector (the eXTP instrument dedicated to the X-ray spectroscopy in the range 2-30 keV), with energy resolution below 240 eV FWHM at 6 keV during the entire mission duration of at least 5 years. This stringent requirement dictates the need to thoroughly verify the characteristics of each single detector before integration in the final layout. We describe the dedicated testing facilities that have been developed. We report on the detector selection criteria and test results obtained in the pre-series production.

### **Collaboration**

X-Ray Observatories (XRO), active in the National Scientific Commission 2 of the INFN

**Primary author:** RACHEVSKI, Alexandre (Istituto Nazionale di Fisica Nucleare)

**Presenter:** RACHEVSKI, Alexandre (Istituto Nazionale di Fisica Nucleare)

**Session Classification:** Photo Detectors and Particle ID - Poster session