

## DEPFET Detector development for the Wide Field Imager of ATHENA

The ATHENA X-ray observatory was selected as ESA's second large-class mission, scheduled to launch in the early 2030s. To enable detailed explorations of the hot and energetic universe, two complementary focal-plane instruments are coupled to a high-performance X-ray telescope. As one of these, the WFI (Wide Field Imager) features an unprecedented survey power by combining an excellent count rate capability ( $\geq 1$  Crab) with a large field of view of  $40 \times 40$  arcmin<sup>2</sup>. In order to achieve the required energy ( $< 170$  eV at 7 keV) and time resolution (5 ms) with monolithic sensors of  $512 \times 512$  pixels, dedicated DEPFET detectors have been developed.

In the course of the detector development, a dedicated production of prototype sensors has been fabricated and tested. The studies of those devices resulted in the selection of one sensor variant, which will be used at the pre-flight fabrication. The excellent spectroscopic performance of the selected detector variant will be demonstrated with recent results of a large size detector with  $256 \times 256$  pixels. The energy response of the device was evaluated by illuminating the detector with characteristic X-ray radiation. Due to the large sensor area, the homogeneity of the entrance window and between individual pixels can be evaluated.

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