

## **Digital spectroscopic improvements in CdZnTe detectors for 2-D and 3-D spectroscopic X-ray and gamma ray imaging.**

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In the last decade, cadmium–zinc–telluride (CdZnTe or CZT) detectors are widely proposed for the development of room-temperature spectroscopic X-ray and gamma ray imagers. Recently, within an Italian research collaboration (DiFC of University of Palermo, IMEM-CNR of Parma and INAF/OAS of Bologna), we developed new imager prototypes, based on CZT pixel/strip detectors and digital pulse processing (DPP) electronics, for X-ray and gamma ray imaging applications (up to 1 MeV). In this framework, we will present the performance of the new detectors and the potentialities of the digital analysis for performance improvements.

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