Selection of CdTe detectors for the detection plane of the ECLAIRs gamma-ray burst detector

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• Schottky In/CdTe/Pt detectors (4×4×1 mm³, produced by ACRORAD Japan)

• Detection plane of the ECLAIRs instrument (= coded mask aperture telescope)
  ↪ trigger of the new SVOM mission for multi-wavelength study of gamma-ray bursts (launch 2012)
  – Energy range = 4 keV to 250 keV
  – Elementary detection module (XRDPIX) = 32 detectors + IDeF-X ECLAIRs ASIC

• Selection of detectors for the flight model (6400 detectors, 1024 cm²), according to their performance (-20°C, reverse bias -600V):
  – leakage current measurements → ~ 30 pA
  – spectroscopy (with ²⁴¹Am) → low threshold ~ 3.0 keV ; resolution at 60 keV ~ 1.6 keV

Selection ⇒ uniform XRDPIX modules and a 4 keV low threshold for the whole plane ⇒ detection of high redshift bursts (z>5)