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Recent studies and characterization on UFSD sensors

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This contribution is focusing on two main topics in UFSD characterization: uniformity of gain in a UFSD productions and effect of the irradiation on these sensors.

In the first part of this contribution I will report on the measurements of the gain layer uniformity performed on UFSD sensors manufactured by Hamamatsu Photonics (HPK) and by Fondazione Bruno Kessler (FBK).

The second part of this contribution is on the effect on the irradiation on UFSD and PiN detectors. We measured the acceptor creation and trapping mechanisms up to fluences of $1E16$ n/cm², and for both effects we saw the onset of saturation.

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