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## Development of new n-on-p active edge pixel detectors for ATLAS Inner Detector Upgrade

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Silicon detectors are playing a key role in High Energy Physics (HEP) experiments due to their superior tracking capabilities. In view of the upgrade plans of ATLAS experiment toward the high luminosity, the silicon tracking detector (ITK) will be operated in a very intense radiation environment. This work addresses the study of active edge n-in-p planar sensors. Active edge planar pixel sensors are promising candidates to instrument the inner layers of the new ATLAS pixel

detector for HL-LHC, thanks to its radiation tolerant properties and the increased fraction of active area due to a distance as low as  $50\mu\text{m}$  between the last pixel implants and the activate edge. This presentation will show the recent results of different and new characterization technique of silicon pixel detectors.

**Auteur principal:** Mme RASHID, Tasneem (LAL)

**Co-auteurs:** Dr LOUNIS, Abdenour (LAL); HOHOV, Dymtro (LAL)

**Orateur:** Mme RASHID, Tasneem (LAL)

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