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Performance of unirradiated TJ-Monopix2

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TJ-Monopix is series of monolithic pixel detectors with column-drain readout architecture and small collection electrode facilitating low-power designs aiming for high-energy collider experiments.

The latest iteration TJ-Monopix2 is designed in a 180 nm TowerJazz CMOS process and features a pixel size of 33 μm x 33 μm . Results from laboratory measurements and test beam campaigns demonstrating threshold and noise performance as well as hit efficiency measurements will be presented to discuss the suitability of TJ-Monopix2 for use in high-radiation environments. Additionally, first results of timing measurements will be presented.

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