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Timing resolution on a 3D silicon pixel detector

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We report the measurements of time resolution for double-sided 3D pixel sensors with a single cell of $50\ \mu\text{m} \times 50\ \mu\text{m}$ fabricated at IMB-CNM. Measurements were conducted using a radioactive source at -20 and 20 degrees C in a bias voltage range of 50 - 200 V. The reference time was provided from an LGAD detector produced by Hamamatsu. Results are compared to previous measurements on identical type sensors.

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