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## Latest results on RSD2 performances, a lab update

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In this work, we present a comprehensive analysis of the spatial and temporal resolutions of RSD sensors belonging to the second FBK RSD production (RSD2). The RSD2 production results from the optimization process performed on the FBK RSD1 sensor production. Specifically, RSD2 sensors have innovative read-out electrode layouts geared toward reaching a uniform response over the whole surface. The performances of the detectors were measured with a Transient Current Technique setup equipped with a picosecond laser with a narrow ( $\sim 10 \mu\text{m}$ ) beam. In this presentation, we will outline the results of such measurements, which yield excellent spatial and timing resolutions: down to about  $5 \mu\text{m}$  and 20 ps time jitter. We will present detailed studies on the effect of varying the n++ electrode doping, the difference between read-out pad geometries, and the best achievable temporal and spatial resolution in each case.

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