

Investigation of charge multiplication in silicon strip detectors

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N-in-p Micron sensors provided by the RD50 collaboration have been irradiated with protons or neutrons up to a fluence of $5 \times 10^{16} \text{ neq/cm}^2$. After irradiation, an annealing study of signal, signal to noise and leakage current has been performed with the ALiBaVa setup at different annealing steps up to 500 days at room temperature. A sample irradiated with neutrons to $5 \times 10^{15} \text{ neq/cm}^2$ and narrow strip width showed a higher charge collection than comparable sensors with other geometries or irradiation particle type.

To investigate the influence of the dependence of collected charge on the oxide charge induced by irradiation, samples with neutron irradiation have been exposed additionally to gamma irradiation. The results will be presented.

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