

Annealing study of a high irradiated FZ CMS mini sensor with the alibava setup

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With the fully operational ALiBaVa setup at Karlsruhe an annealing study of a standard CMS mini sensor (FZ, n-type) was performed. The chosen fluence of 7.5×10^{14} Neq/cm² lies well above expectation for strip sensors after 300fb⁻¹ at LHC and allows exploring the performance at even higher fluence, e.g. due to higher integrated luminosity before replacement of the strip Tracker or as material for S-LHC down to a radius of about 45cm. The focus of this study is on measured signal and signal to noise ratio. The sensor was not only run in reverse bias mode but with forward bias too, where we had a closer look at current and noise annealing.

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