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Characterisation of the FBK EXFLU1 thin sensors with gain in a high fluence environment

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The EXFLU1 batch of LGAD sensors on substrates of thickness between 15 and 45 μm were exposed to various radiation grades between 1×10^{-14} and 5×10^{-15} $n_{eq}cm^{-2}$ using the neutron reactor at JSI. The sensor designs themselves, manufactured at FBK, are optimised to preserve characteristics at high fluences. The latest studies of the effects of radiation have been performed, with the impact on thin sensors of varying design considered for their characterisation pre- and post-irradiation, and are presented.

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