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Generation shallow radiation damages at the strip surface with low energy protons.

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The aim of the shallow radiation damage generation study is the creation of a multiplication layer close to the silicon sensor surface. This is done by irradiating the sensor with low energy protons at the Birmingham cyclotron, which should stop within approximately 20μm. Geant4 simulations have been used to find the best settings for the irradiation. First sensors have been irradiated with 12 MeV protons and the results will be shown.
After the proton irradiation the whole sensors have been irradiated with neutrons at Ljubljana to fluences of 1E15 neq/cm2 and 5E15 neq/cm2. A comparison with standard sensors will be presented.

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