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【390】 The Bern Cyclotron proton irradiation facility

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The Bern cyclotron, used for production of medical radioisotopes, also features a beam-line dedicated to physics research, a unique setup in Europe. An irradiation facility was established there for campaigns with 18 MeV protons. The energy spread is 2% over an adjustable beam size up to $2 \times 2 \text{ cm}^2$. The beam current can be varied and monitored between $\sim 1 \text{ pA}$ and $150 \text{ }\mu\text{A}$, whereas also the integrated dose is determined. A movable stage allows to irradiate samples of up to a size of $20 \times 20 \text{ cm}^2$. In this talk we present the facility as well as applications, like the irradiation of novel pixel sensors for new tracking detectors for the HL-upgrades of the LHC.

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