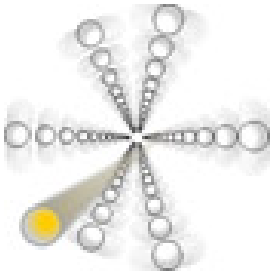

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Experiments with Bent Crystals for High Energy Ion Beams

Tuesday, 25 September 2012 09:30 (15 minutes)

Short review of the experiments on the deflection and extraction (collimation) of high energy ion beams with bent crystals performed in the accelerator centers is presented. The channeling parameters depend on the ratio of particle momentum to its charge pz therefore the efficiency of the crystal deflector is the same for protons and ions with equal pz. The difference appears mainly in multi-turn process of the beam halo collimation because of much larger cross section for nuclear interactions and ionization losses of heavy ions in a crystal. Besides, a probability of electromagnetic dissociation for Pb ions of the LHC energies becomes visible even for well channeled particles.

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