

Crystal shadowing in the SPS

Slow extraction is an unavoidably lossy process. Primary particles are deemed to intercept the electrostatic septum wires while separating the extracted from the circulating beam. Over the last years, a technique to reduce septum losses has been proposed at CERN for the SPS: shadowing of electrostatic septum via Silicon bent crystals. Very promising results both in dedicated measurements campaign and during normal physics production were shown for the local shadowing concept. In this contribution, we present the latest results at the CERN SPS using non-local shadowing concept to further reduce losses (now achieving a 50% loss reduction), its implementation and expected performance reach.

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