First Results on Study of Optimal Crystal Extraction at 70 Gev IHEP Accelerator,
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A radical increase of extraction efficiency is reached by use of a short crystal, bent on the small angle of 1.5 mrad. Unlike in a long crystal, another mechanism of the growth of the efficiency of extraction of particles begins to work, related to the increase of the average number of encounters of particles with a crystal. The efficiency of extraction about 20% by means of a 7-mm long crystal is experimentally achieved, in aggrreement with theory. The record value of extracted intensity about 2×10^{11} protons/s is reached.