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## Dependence of probability of close collisions of high-energy charged particles in a bent crystal from the orientation of the crystal

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An investigation on the probability of close collisions of high-energy charged particles in a bent crystal was carried out. On the basis of analytical calculation and numerical simulation we analyzed the dependence of this probability from the orientation of the crystal with respect to the direction of fast charged particles motion. Comparison of the probability of close collisions was done for three main mechanisms of beam deflection in a bent crystal: planar channeling, volume reflection and stochastic deflection. Peculiarities of the dependence of the probability of close collisions from the orientation of the crystal were explained with a help of random string approximation.

### Summary

An investigation on the probability of close collisions of high-energy charged particles in a bent crystal was carried out.

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