

Abstract Submitted
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Directional Correlation of Nuclear-Collision Probability for Aligned Beams of Deformed Nuclei MITSUNORI FUKUDA, MASAOMI TANAKA, SHINTARO YAMAOKA, JUNICHI OHNO, MOTOTSUGU MIHARA, KENSAKU MATSUTA, Dept. Phys., Osaka Univ., DAIKI NISHIMURA, KENTA YOSHINAGA, Dept. Phys., Tokyo Univ. of Science, MAYA TAKECHI, TAKASHI OHTSUBO, Dept. Phys., Niigata Univ., TAKUJI IZUMIKAWA, RI Center, Niigata Univ., MASAYUKI NAGASHIMA, Dept. Phys., Niigata Univ., TAKESHI SUZUKI, TAKAYUKI YAMAGUCHI, Dept. Phys., Saitama Univ., ATSUSHI KITAGAWA, SHINJI SATO, SHINJI SUZUKI, SHIGEKAZU FUKUDA, HIMAC, Nat. Inst. Rad. Sc., HIMAC H093 COLLABORATION — In the long history of nuclear physics, a lot of observables have been discussed in connection with the nuclear deformation. In this work, an investigation have been carried out on the directional correlation of the nuclear-collision probability between the direction of beam of deformed nuclei and the deformation axis, to sense the nuclear deformation directly. Few experimental studies of this kind have been done because of the difficulties in producing aligned beams. We utilized the projectile fragmentation to produce the aligned nuclear beams. We tested these measurements for ^9Be , ^{10}B , and ^{26}Al at the HIMAC facility. By selecting the parallel momentum using the separator, spin aligned beams were produced, with which the interaction cross sections were measured. The cross sections were precisely measured as a function of longitudinal momentum. We will report on the details of measurements and discussions on this intriguing result.

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