

DIRECT BREAKUP RECTIONS OF ^8B AT FERMI ENERGY

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^8B is one of proton halo nuclei due to the very small separation energy of the last proton. Many experimental and theoretical efforts are done for ^8B . The recently experimental result of direct breakup reactions of ^8B , which were carried out at Radioactive Ion Beam Line in Lanzhou (RIBLL), will be shown. The longitudinal momentum distributions of ^7Be fragments in the breakup of ^8B on a carbon target have been measured at the energy of 36 MeV/u. The longitudinal momentum distributions of ^7Be fragments from both the stripping and the diffraction mechanisms have been distinguished by coincidence measurements. The full widths at half maximum of the longitudinal momentum distributions are 124 ± 17 and 92 ± 7 MeV/c for the stripping and diffraction components, respectively. The results are compared with the non-eikonal calculations and CDCC calculations. It is pointed out that separating the different reaction mechanisms experimentally is crucial to benchmark nuclear reaction theories.