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Target effect of fragmentation reactions at intermediate energy SADAO MOMOTA, YOICHI NOJIRI, Kochi University of Technology, MITSUTAKA KANAZAWA, ATSUSHI KITAGAWA, MITSURU SUDA, MAKOTO SASAKI, SHINJI SATO, NIRS — To investigate the production mechanism of projectile-like fragments (PLF's) at intermediate energies, the momentum distributions of PLF's produced from Ar beam at intermediate energy were measured. The production cross sections were derived by integrating observed momentum distributions. The present results are useful to design experiments, which will be done at new RIB facilities. The measurements were performed by using HIMAC facility at NIRS. The longitudinal and transverse momentum distributions of PLF's produced in the reactions with ZP = 18 and ZT = 6 $\sim$ 79 at E/A = 290 MeV were measured. In the reaction with heavier targets, the transverse momentum distribution was broader than that measured with lighter targets. This broadening effect is remarkable for heavier PLF's (AF $>$ 20) and negligible for lighter ones. This result implies that the effect of the Coulomb force shrinks caused by the nuclear force in the case of lighter PLF's. The target effect was found in the production cross sections of PLF's derived from observed momentum distributions as well. The production mechanism of PLF's will be discussed based on the present results by comparing with the theoretical results.

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