

## BREAK-UP REACTIONS OF ${}^6\text{Li}$ , ${}^7\text{Be}$ , AND ${}^8\text{B}$

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Secondary beams ( ${}^6\text{Li}$ ,  ${}^7\text{Be}$ ,  ${}^8\text{B}$ ) obtained by separation of fragmentation products of  ${}^{15}\text{N}$  beam (50 MeV/A) impinging on a Be target using COMBAS spectrometer. The secondary products were detected by a telescope consisting of five Si-detectors ( $\Delta E$ ) and CsI(Tl) detector ( $E_T$ ). By the  $\Delta E$ - $E$  method, the telescope allowed us to achieve unambiguous particle identification originating from incident secondary beams as well as their reaction products resulting from reactions with one of Si detectors chosen as the target. Accordingly, break-up reactions of  ${}^6\text{Li}$ ,  ${}^7\text{Be}$ ,  ${}^8\text{B}$  (Fig.1) were studied in this experiment. The parallel momentum distribution of  ${}^3,4\text{He}$ ,  ${}^6\text{Li}$ ,  ${}^7\text{Be}$  produced from the break-up of  ${}^6\text{Li}$ ,  ${}^7\text{Be}$  and  ${}^8\text{B}$  was also determined. Theoretical analysis of presented experimental data was carried out using a numerical solving of the time-dependent Schrödinger equation for the outer weakly bound nucleons of the projectile nuclei.

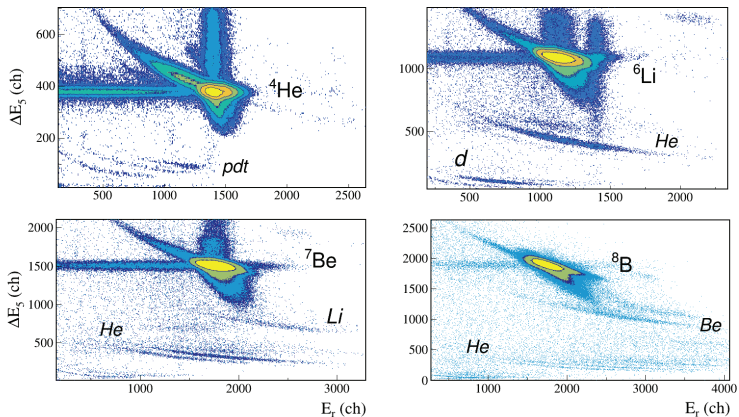


Fig. 1. Two-dimensional energy spectrum of  ${}^4\text{He}$ ,  ${}^6\text{Li}$ ,  ${}^7\text{Be}$ , and  ${}^8\text{B}$  after the secondary reaction.