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## **ІНКЛЮЗИВНІ РЕАКЦІЇ ЗРИВУ ТА ФРАГМЕНТАЦІЇ ЛЕГКИХ КЛАСТЕРНИХ ЯДЕР ПРИ ПРОМІЖНИХ ЕНЕРГІЯХ**

У рамках ейконального наближення та моделі подвійного фолдінгу запропоновано формалізм обчислення інклюзивних спектрів частинок із реакцій зриву та розвалу за участю легких кластерних ядер. Описано переріз реакції  $^{12}\text{C}(^3\text{He}, d)^{13}\text{N}$  при енергії падаючих частинок 81,4 MeV та спектри протонів із реакції розвалу дейтронів з енергією 56 MeV ядрами  $^{12}\text{C}$  та  $^{27}\text{Al}$ . Розраховані величини задовільно узгоджуються з відповідними експериментальними даними.

*Ключові слова:* інклюзивна реакція, ейкональне наближення, модель подвійного фолдінгу.

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## **INCLUSIVE REACTIONS OF STRIPPING AND FRAGMENTATION INVOLVING LIGHT CLUSTER NUCLEI AT INTERMEDIATE ENERGIES**

In the framework of eiconal approximation and the double folding model, a formalism for calculating inclusive spectra of particles from stripping and fragmentation reactions involving light cluster nuclei is proposed. The cross-section of the  $^{12}\text{C}(^3\text{He}, d)^{13}\text{N}$  reaction at an incident particle energy of 81.4 MeV and the proton spectra from the deuteron fragmentation reaction with 56 MeV energies by  $^{12}\text{C}$  and  $^{27}\text{Al}$  nuclei are described. The calculated values satisfactorily fit the corresponding experimental data.

*Keywords:* inclusive reaction, eiconal approximation, double folding model.

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