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# Signatures of Target Fragmentation of Nuclear Emulsion by Light Nuclei

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The interactions of a proton (3.7 GeV) with an emulsion can reveal the behavior of the nucleon–nucleus interactions. Furthermore, the interactions of $^{4}$He (2.1A GeV) and $^{7}$Li (2.2A GeV) with an emulsion introduce adequately a manner-representing nucleus–nucleus interactions. On the other hand, a major part of this work concerns the target fragmentation process. Thus, the yields of the target fragmentation (heavily ionizing particles $N_h$) have been studied on the basis of a comprehensive analysis of the data in the literature. The complete destruction of Ag nuclei (heaviest target in the emulsion) is achieved at a limiting value of $N_h$ ($N_h \geq 28$) for the nucleus–nucleus interactions. This study gives an indication of being a rich source of information on nuclear structure.
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