FRAGMENTATION FEATURES OF Be, B, C NUCLEI IN NUCLEAR TRACK EMULSIONS

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The report will give a brief overview of the experimental results of the relativistic fragmentation of ^{7,9}Be, ^{10}B, ^{10,12}C in the Becquerel project in JINR. The fragmentation of a large variety of light nuclei was investigated using the emulsions exposed to few A GeV nuclear beams at JINR Nuclotron-NICA complex . A nuclear track emulsion is used to explore the fragmentation of the relativistic nuclei. The presented observations serve as an illustration of prospects of the modern accelerators and nuclear track emulsions for nuclear physics researches. Due to a record space resolution the emulsion technique provides unique entirety in studying of light nuclei, especially, neutron-deficient ones. Providing the 3D observation of narrow dissociation vertices this classical technique gives novel possibilities of moving toward more and more complicated nuclear systems. It was studied fragmentation of Be, B, C nuclei with energy 1.2 A GeV in a nuclear track emulsion, derived at the Nuclotron-NICA, JINR. The results of an exclusive study of the interactions of relativistic ^{7,9}Be, B and C nuclei lead to the conclusion that the known features of their structure are clearly manifested in very peripheral dissociations

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2. P.I. Zarubin et al. Prospects of Searches for Unstable States in Relativistic Fragmentation of Nuclei. Phys. Atom. Nuclei 85, 528–539 (2022). https://doi.org/10.1134/S1063778822060035