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Investigation of fragmentation (Z=2) of relativistic nuclei ^{16}O and ^{208}Pb

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The angular distributions of doubly charged fragments of a nucleus ^{16}O with the momentum 4.5A GeV c^{-1} and ^{208}Pb with the momentum 160A GeV c^{-1} during their interaction with photoemulsion nuclei were studied. Contrary to common belief that fragmentation of relativistic nuclei in a wide range of masses and energy conforms to the statistical model, the experimental angular distributions of doubly charged fragments of these nuclei are not described by this model. The mechanisms of fragmentation of the oxygen nuclei can at least be assumed based on angle measurements and visual observation of all events of their inelastic interactions with emulsion nuclei. The lead nuclei fragmentation is associated with much more numerous processes. But it is not possible to identify them using the angular measurements only.

Biography

E A Kotikov is a Researcher at B P Konstantinov Petersburg Nuclear Physics Institute from Russia. His areas of interest are Fragmentation Process and Structure of Nuclei. He has published many papers in various reputed journals.

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