

Development of method for determining the heavy ion characteristics using solid-state detectors (glasses, minerals)

The report presents the results of development of an algorithm for determining the charge and energy of heavy ions based on the characteristics of the etched tracks in optically transparent solid-state detectors. Initially, the procedure was developed for the experiment to search for and identifying primary cosmic radiation nuclei registered in meteorite olivines, and their charge determination. Currently, the algorithm is being upgraded for simultaneous determination of charge and energy. The ability of the tested materials to preserve ion tracks at high temperatures is being tested. These materials are promising, in particular, for registration by method of gas thermochromatography of fission products of superheavy nuclei synthesized on accelerators.

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