

Current status and prospects of nuclear physics research based on tracking techniques

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Results of nuclear physics research made using track detectors are briefly reviewed. Advantages and prospects of the track detection technique in particle physics, neutrino physics, astrophysics and other fields are discussed on the example the results of research into the search for direct origination of tau neutrino in a muon neutrino beam within the framework of the international experiment OPERA (Oscillation Project with Emulsion-tRacking Apparatus) and works on search for superheavy nuclei in nature on base of their tracks in meteoritic olivine crystals. The spectra of superheavy elements in galactic cosmic rays are presented. Prospects of using the track detection technique in fundamental and applied research are reported.

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