

21. APPLICATION OF THE ARTIFICIAL NEURAL NETWORKS FOR ALPHA SPECTROMETRY BY MEANS OF PLASTIC DETECTOR CR-39

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New technique of alpha spectrometry with usage of solid state nuclear track detectors, based on application of artificial neural networks, was described. For tracks images recognition, which was obtained by optical microscope, we applied a neural network of opposite propagation. Effective selection of different tracks types and their discrimination from noises was achieved. Due to this the energy resolution of technique was improved. Presented approach is very perspective alternative of tracks discrimination as the traditional methods of shapes algorithmization are too complicated and dependent on scanning conditions.