

Monte Carlo techniques in Radiological Characterization for Reactor Decommissioning

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Radiological characterization of shut down nuclear reactors is one of the most important and basic steps because it can directly affect the whole approach to decommissioning. For this purpose Monte Carlo techniques can generate a specific activity for each radionuclide present in the material in a particular region of interest whether it results from radioactive releases from the fuel, or it is activated product which occurred during normal operation or unplanned events. Monte Carlo techniques are almost irreplaceable in the situation when is necessary to have a realistic assessment of the activities of hard-to-detect radionuclides in a mixture of various radioactive substances when scaling factor approach can be used. In this work MCNP geometry model of semiconductor Si detector, Ge detector and GM hand probe are used for radiological characterization during decommissioning of shut down research reactor RA at the Vinča Institute.

Country or International Organization

Serbia

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