Calculation of Spatial Weight Function of the SNM-11 Ex-Core Detector for VVER-440 Reactor

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Abstract. The goal of this work is focused on determination of spatial weight function for the SNM-11 ex-core detector. This detector is used in source range during the start-up process of the VVER-440 reactor in Mochovce NPP unit 1,2. Calculations of the weight factors for the chosen fuel assemblies will be done with a simplified model of the VVER-440 reactor core with its surroundings. Monte Carlo method was chosen to be used. The calculations are done using MCNP5 code. Since the work is still in progress, the article will present only the description of the simplified VVER-440 reactor model with selected core source area. It also contains methodology used to calculate the weight factors and determine the spatial weight function of the chosen ex-core detector.