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**NEUTRON SPECTRA AND FLUXES IN HORIZONTAL CHANNELS
OF RESEARCH REACTOR WWR-M WHILE CONVERSION
ON LOW-ENRICHED FUEL**

Neutron fluxes and spectra in the horizontal experimental channels of reactor WWR-M of the Institute for Nuclear Research, National Academy of Sciences of Ukraine (Kyiv) have been calculated using neutron transport Monte Carlo model with fuel enriched in ^{235}U both to 36 and 19.7 %. It is shown that at the very beginning operating with low-enriched fuel, when the reactor core is 28 % filled with "fresh" fuel assemblies, and the remaining cells are filled with beryllium displacers, there is a significant change in the parameters of neutron beams. However, after the reactor will begin to operate at its usual mode, that will be after completing all or most part of the core with fuel assemblies partially burnt out, spectra and fluxes in channels will restore most of their previous values. Some differences are mainly due to changes in composition of the core – the removal of two voluminous vertical water channels located within the core. The work can be helpful to experimenters working with extracted beams at this reactor and so at other reactors that have been converted to low-enriched fuel.

Keywords: nuclear research reactor, neutron spectra, neutron fluxes, horizontal experimental channels, Monte Carlo calculation.