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Creation and results of experiments on a full scale model of the cold moderator in the central direction (CM 1) for IBR-2 reactor. Technical support and devices.

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In the plan of the modernization IBR-2 reactor around a reactor core will be installed 3 cryogenic neutron moderators. For slowdown neutrons in moderators use a mesitylene with m-xylene as frozen beads with a diameter of 3-4 mm. These pellets are served in a moderator chamber by a helium flow. Currently, one of the moderators (202) is already installed and working on the experiment.

Given the positive experience of the moderator (202) is now commissioned a full-scale stand retarder 201 with reference to the premises. The report will be submitted to the moderator 201. The main problem of transportation is download pellets in a moderator chamber (pellets should raise up the height of 4 meters at an angle of 50 degrees). It condition is defined by the geometric position of the moderator in a reactor biodefense . Will present the results of experiments on the loading pellets into the moderator chamber and proposed the concept of a moderator with the continuous change of pellets without stop of the reactor cycle. In presentation will be show a cryogenic system for all cryogenic complex of cold moderator. It is including two cryogenic refrigerators 700 watt and 1200 watt. If necessary, refrigerators can replace each other.

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