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Radiation Damage Studies of Silicon Photomultipliers in Neutrons Field of IBR-2.

It is reported on the study of radiation resistance of silicon photomultipliers (sipm) produced by HAMAMATSU. SiPM was irradiated in neutron fluxes of the reactor IBR-2 of JINR. The tested SiPM received fluence from 10^{12} up to 2×10^{14} of neutrons /cm². Irradiated detectors investigated using a radioactive source and laser flashes at a temperature of -30C. The measurements showed that the sipm remain fully functional as photon detectors up to neutron fluence 2×10^{14} despite a significant increase in noise.

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