Measurement of the phase space of proton beam in BINP accelerator based neutron source

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An accelerator based neutron source is in operating at the BINP for the development of Boron Neutron Capture Therapy and other applications. Phase space of proton beam was measured using a cooled diaphragm and a wire scanner. The measured phase space and the calculated invariant normalized emittances make it possible to conclude that the proton beam can be transported to an adjacent experimental bunker for clinical trial of Boron Neutron Capture Therapy and down to a protected room for radiation testing of materials developed for ITER and CERN.

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