

Report of the Reviewer on the proposal for the Project “Development of an inelastic neutron scattering spectrometer in inverse geometry at the IBR 2 reactor (DINSS)” (Theme 1142)

The planned spectrometer will be equipped with the most modern neutron optics manufactured by Swiss Neutronics, which will focus a neutron beam from a size of 15x20cm² at the input of a neutron guide to a size of 3x3cm² at the sample location, The secondary spectrometer will also have an original design, allowing to have a large crystal area of highly oriented pyrolytic graphite analysers.

Thus, due to neutron optics of the primary spectrometer and a significantly larger analyser crystal area, the total gain in the luminosity of the new spectrometer will be more than 180 times.

All this will make the new spectrometer a flexible and highly effective instrument for neutron spectroscopy, which allows working with small samples weighing tens of milligrams, significantly reduces the time of measurement, and makes it possible to carry out parametric measurements.

The Project will be realized at the Department of Neutron Scattering Investigations of Condensed Matter of FLNP. The Department personnel are well known among the international neutron scattering community for their long standing experience in the field of the considered activities, supported by high quality publications, conference presentations.

Finally, I recommend realization of these activities at JINR according to **category A**.



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