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Distributed Hall Measuring System

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At the BINP the VEPP-5 injection complex delivers electron and positron beams through transportation channels to the VEPP-4M and VEPP-2000 colliders. There is a necessity to change magnetic field vectors in dipole magnets to deliver particles with different charges, such as positrons and electrons. Because of some physics effects, in order to achieve precise adjustment of field, it's necessary to register not only current in magnet coils, but also the field itself in the transportation channel of the injection complex. The aim of the work is a development of a device which would measure a magnetic field in the injection complex transportation channel with an accuracy more than 10^{-3} . Hall effect method was chosen. An experiment on Hall sensors resistance to radioactivity was conducted. Two stands for this experiment were created and assembled. Change of Hall parameters due to time spent in radiation was registered. The experiment successfully demonstrated that the hall sensors operate in conditions of the injection complex radiation.

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