

Development of a position-sensitive neutron detector using MPPC

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The KENS-DAQ group has been established at KENS in KEK. In the group, we are developing of readout electronics and programs for neutron experiments at the Japan Proton Accelerator Research Complex (J-PAR). A position-sensitive neutron detector using MPPC (MPSD) is one of them.

The latest MPSD has 32cm x 5mm detection area, and it has 3mm position-resolution along the long side. The detection efficiency of it is about 30% compared with a ^3He detector. Fig. 1 shows the MPSD.

A readout (NEUNET) system for using a linear position-sensitive ^3He gas detector (^3He -PSD) is widely used at the Materials and Life Science Experimental Facility (MLF) at J-PARC. This NEUNET system is able to control of the MPSD.

This poster reports on the details of the MPSD.

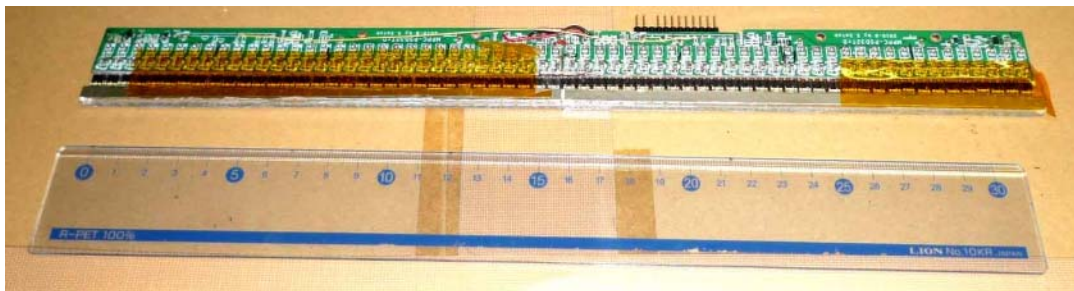


Fig. 1 MPSD has 32cm x 5mm detection area.