



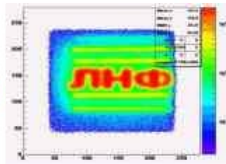
JINR exercises proposal

Thermal neutron detection

Andrey Churakov

CREMLIN+ Detector School meeting

22/02/2022



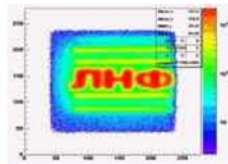
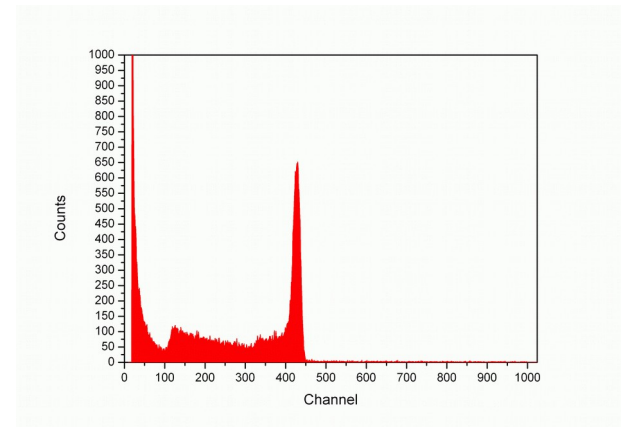


Exercise 1. Amplitude spectrum of the proportional He-3 neutron counter.

4 students

4 hours (2 theory + 2 practice)

Neutron counter, oscilloscope, preamplifier, ADC, PC,
neutron source



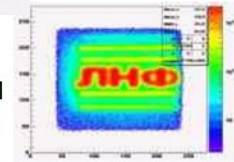
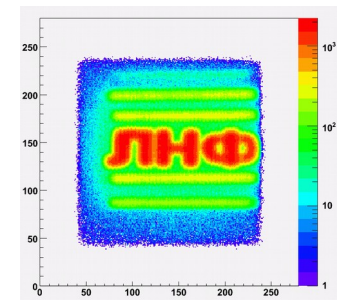
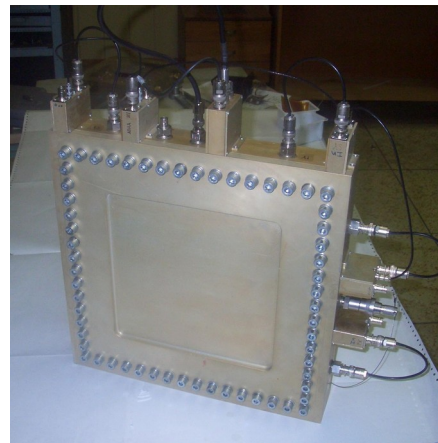
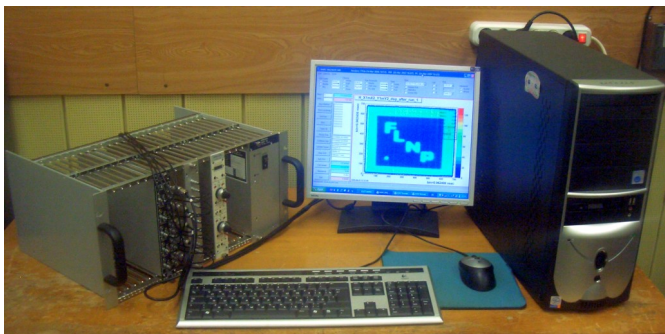


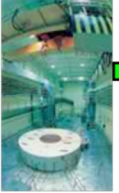
Exercise 2. Neutron radiography with the position sensitive detector (PSD).

4 students

4 hours (2 theory + 2 practice)

PSD, oscilloscope, front-end and DAQ electronics, PC, cadmium mask, **neutron source**





Exercise 3. Simulation of a proportional He-3 counter with GEANT 4

4 students

2 hours

4x PC with Debian 10, Root, Geant 4, SRIM2013.



SRIM-2013
The **S**topping and **R**ange
of **I**ons in **M**atter

