

## Compact neutron generators for the calibration of low background experiments

Monday, 22 October 2018 15:40 (150)

In the coming years, the compact monoenergetic neutron generators producing up to  $10^3$  n/s may become an alternative to the standard neutron sources based on radioactive isotopes for the calibrations of neutrino and dark matter detectors. Such neutron generators have a typical size of about several centimetres, they may be manufactured using low-background materials and require only low voltage power supply like a standard CR2032 battery for operation. We discuss the advantages and disadvantages of two types of the compact neutron generators, namely a pyroelectric neutron source and a source based on the carbon nanotubes. Also the results of the technical analysis of the possibilities to apply such sources for the calibration of low-background experiments are given, the variants of the internal device design are shown and the data of the primary tests of a full-size compact neutron generator prototype are presented.

The research was supported by the grant from the Russian Science Foundation (project №16-19-10535).

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**Session Classification :** Poster session and coffee-buffet

**Track Classification :** Facilities and advanced detector technologies