

Contribution ID: 307

Type: Poster

Measurements of the UCN energy spectra and their time evolution in a large storage volume

Tuesday, 18 October 2022 16:08 (1 minute)

The energy spectrum of ultracold neutrons (UCN) is an important factor in determining the systematic effects in precision measurements utilizing UCNs. We performed UCN energy spectrum measurements in a large storage tank filled by the PSI UCN source and studied its time evolution using OTUS - an oscillating spectrometer [1]. The obtained results will be compared to the TOF method and a detailed Monte Carlo simulation [2]. In this contribution, the current status of the OTUS project will be reported including the evolution of the energy spectrum for different UCNs storage times.

References:

[1] D. Rozpedzik, et al., EPJ Web of Conf. 219, 10007 (2019).

[2] G. Bison, et al., EPJ A 58, 103 (2022).

Primary author: ROZPEDZIK, Dagmara (Jagiellonian University)

Co-authors: LAUSS, Bernhard (PSI - Paul Scherrer Institut); ZSIGMOND, Geza (PSI - Paul Scherrer Institut); BODEK, Kazimierz (Jagiellonian University, Institute of Physics); KIRCH, Klaus Stefan (PSI - Paul Scherrer Institut); SCHMIDT-WELLENBURG, Philipp (PSI - Paul Scherrer Institut); RIENAECKER, Ingo (PSI - Paul Scherrer Institut); LOJEK, Konrad (Jagiellonian University, Institute of Physics)

Presenter: ROZPEDZIK, Dagmara (Jagiellonian University)

Session Classification: BBQ - Drinks & Posters