

EGU2020-3353, updated on 28 Jul 2021

<https://doi.org/10.5194/egusphere-egu2020-3353>

EGU General Assembly 2020

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## Characteristics of natural neutron radiation background performed within the BSUIN project.

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The BSUIN (Baltic Sea Underground Innovation Network) aims to enhance the accessibility of the underground laboratories in the Baltic Sea region for innovation, business and science. One of the BSUIN project activities is characterization of natural background radiation (NBR) in underground facilities. A specific type of NRB is neutron radiation, whose measurement requires specific instruments and long-term exposure in-situ, in heavy underground conditions.

In this talk the method of natural neutron radiation background will be presented as well as results of pilot measurements in several underground locations. In order to make this measurements, a measuring setup was designed and made. The setup design is closely matched to the task: the setup is scalable in a wide range, completely remotely controlled (via the Internet) and capable of long-term operation (months).

The pilot measurements were performed in Callio Lab, Pyhäsalmi, Finland, (4100 m w.e.), in Reiche Zeche mine in Freiberg, Germany (410 m w.e.) and in Experimental Mine "Barbara" in Mikołów, Poland (100 m w.e).