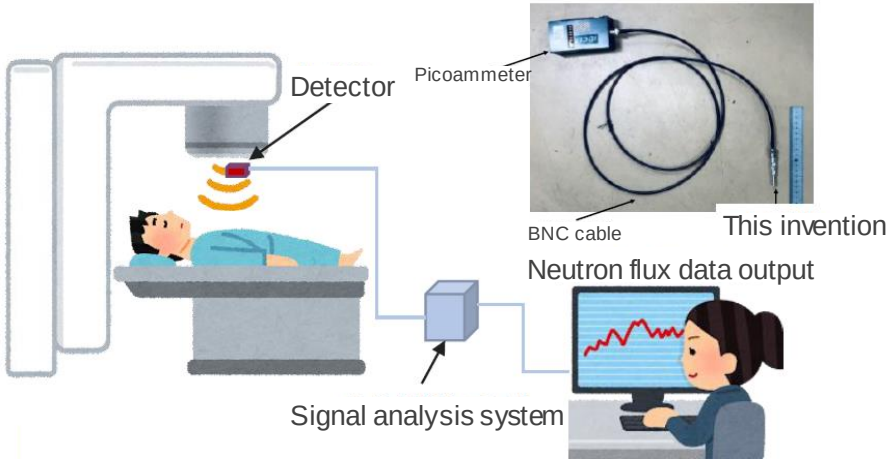
Tohoku Univ. Technology

Neutron beam detector

High-performance neutron counter which is compact, fast, accurate and robust against gamma radiation but doesn't need power source



Overview

Conventional neutron beam detector has several issues such as the detection unit size is large, the power source is necessary, the device is complicated so the design becomes costly, the noise is included in the signal current, an expensive gas is required, and lastly the detector is expensive due to the design & manufacturing cost.

This invention is about a low cost high accurate compact neutron beam detector that doesn't require power source, and has a simple structure by using a commercially available ■■.

Since the highly radiation-resistant semiconductor has been used as an element, it is expected to be used in high neutron flux environment such as neutron flux measurement, for example the boron neutron capture therapy (BNCT) which is a next generation cancer treatment.

Since the application has not yet been published, the information can be disclosed after concluding a fee-based contract that includes a confidentiality clause.

Outstandings

- No power source required
- Compact
- Low cost
- Use of element with high gamma-ray resistivity
- Easy insert, noise resistant

Product Application

- Monitoring of nuclear reactor and accelerated neutron generator
- Neutron experimental device for space development and basic nuclear physics research
- Exploration of natural resource such as mineral deposit, etc.
- Medical field such as BNCT, etc.

IP Data

IP No. : JP2021-012373
Inventor : OKUNO Yasuki
Admin No. : T20-1056

Contact

Tohoku Techno Arch Co., Ltd.
Please visit CONTACT here