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Accelerator-based isotope production

Monday, 20 May 2024 10:00 (30 minutes)

The World-wide accelerator-based isotope production for research as well as medical and industrial applications is growing. Aside the use of isotopes in fundamental research, their medical use is widely known, and isotopes enjoy growing importance in many fields. Isotopes are used in inter disciplinary research as tracers to examine the trace flow of nutrients and pollutants in the environment for instance. Isotopes are also used to characterize newly designed materials and the behavior of nano-structured materials that play a key role in modern electronics devices.

The production and investigation of short lived isotopes, also known as rare-isotopes, is mainly based on accelerators using different nuclear reactions. This talk gives an overview of the accelerators used for isotope production, the relevant performance parameters, and new trends that drive the technology development and physics understanding of these accelerators.

Footnotes

Funding Agency

Paper preparation format

Region represented

North America

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