

Physikalisches Kolloquium

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Partitioning & Transmutation and how MYRRHA is a cornerstone project

The safe handling of waste arising from spent nuclear fuel poses several engineering challenges. The principle of partitioning and transmutation of this waste is analogous to what we have seen over the past decades in managing household waste: one separates (partitions) the waste in different waste forms (paper, glass, plastic, PP, ...) and one applies different recycling techniques to each waste stream (transmutation). It has been demonstrated that Accelerator Driven Systems (subcritical reactors driven by a spallation source) can be a very efficient means to perform this transmutation of nuclear waste. MYRRHA is project dedicated to the design and construction of an *at-power* Accelerator Driven System. In this talk, I will give an overview of the spent nuclear fuel problem, the process of partitioning and transmutation, the principles of an Accelerator Driven System and the current design of MYRRHA and how SCK CEN and other international labs contribute to the R&D needed to construct this innovative facility.

Dienstag, 17.01.2023, 14:15 Uhr

Ort: Hörsaal 6 & Zoom

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