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Aushang

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Einladung zum Seminar über „Nukleare Energieerzeugung“

Zeit: Montag, 13. Januar 2025, 11:00 Uhr

Ort: Karlsruher Institut für Technologie, Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen, INR, Bau 521, Raum 302

Referent: Herr Dr. Mauricio Exequiel Cazado, Karlsruher Institut für Technologie, INR

Titel: Analysis of Accident Scenarios in a Generic Natural-Circulation iPWR using the code ASTEC within the SASPAM-SA Project

Abstract:

In response to the need for safe and sustainable energy solutions, the emergence of Small Modular Reactors (SMRs) has attracted significant interest. SMRs are designed to be safer than traditional Nuclear Power Plants (NPPs) due to their smaller core loads and advanced safety features. The ongoing HORIZON-EURATOM SASPAM-SA project addresses the transferability of knowledge from large Light Water Reactors (LWRs) to integral Pressurized Water Reactors (iPWRs) and analyses the behaviour of generic SMR designs with passive mitigation strategies under accident conditions. In this context, this study investigates the safety assessment of a generic natural circulation iPWR using the code ASTEC (Accident Source Term Evaluation Code) developed by the French Institute for Radiation Protection and Nuclear Safety (IRSN). The ASTEC code is capable of simulating a complete accident sequence in a NPP, from the initial event to the potential release of radioactive elements outside the containment, involving the modelling of diverse thermal-hydraulic and physico-chemical phenomena. In this work, the results derived from the analysis of hypothetical Design-Basis Accident (DBA) and Severe Accident (SA) scenarios, in one of the two generic iPWRs considered in the SASPAM-SA project, are presented, showing the ability of the code to adequately describe the main thermal-hydraulic and core degradation phenomena.

Hinweis: Alle auswärtigen Besucher des Seminars werden gebeten, ihren gültigen Personalausweis oder Reisepass mitzubringen

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