



Contribution ID: 5

Type: Oral Presentation

Assessment of Beryllium Depletion Modeling on SAFARI-1 Reactor Core Parameters in aid of OSCAR-4 Validation

Wednesday, 11 July 2012 10:55 (20 minutes)

Abstract content
 (Max 300 words)

This work investigates the nature and extent to which the build-up of lithium-6 and helium-3 isotopes affects the properties of beryllium reflectors in the nuclear reactor environment. The fundamental principles involved with regards to reactor simulation, and how these principles are applied, are discussed in detail. The work involves the assessment of a suggested method for simulating the impact of beryllium depletion on reactor core parameters using the OSCAR-4 code system. The study plays an integral part in validating OSCAR-4 for application to the SAFARI-1 research reactor at Pelindaba, South Africa. Assessment is done using extensive comparisons between simulated and experimental data.

Apply to be
 consider for a student
 award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
 PhD)?

MSc

Main supervisor (name and email)
and his / her institution

Azwinnadini Muronga, amuronga@uj.ac.za,
University of Johannesburg

Would you like to
 submit a short paper
 for the Conference
 Proceedings (Yes / No)?

Yes

Primary author: Mr BRAYSHAW, Richard (Necsa, Eskom)

Presenter: Mr BRAYSHAW, Richard (Necsa, Eskom)

Session Classification: NPRP

Track Classification: Track B - Nuclear, Particle and Radiation Physics