

Service de Physique Nucléaire



Séminaire

le vendredi 18 juillet 2008 à 11H

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

Simulation activity for spallation reactions at BARC

Harphool KUMAWAT

Bhabha Atomic Research Centre, Mumbai, INDIA

Recent developments in accelerator technology have given boost to study sub-critical hybrid reactor systems for transmutation of nuclear waste and utilization of thorium and actinide fuels. Simulation codes have been developed to investigate the characteristics of such systems. These codes need to be benchmarked with the recently available good quality experimental data on various observables. The CASCADE code was originally developed in JINR, Dubna and has been recently modified for Evaporation and Fission processes. New features like activity build-up and decay by solving Bateman equation, Neutron dose calculations etc. have been added in recent past. The results obtained with the present version of code CASCADE.04 for spallation products, neutron multiplicity, radiation shielding and produced volatile products will be discussed. Some studies of upcoming facilities at Low-Energy-High-Intensity-Proton-Accelerator (20MeV, 30mA), Cyclotron (30MeV, 0.5mA) and Multi-Purpose-Research-Reactor (300-800MeV) will be covered.

Le café sera servi 10 minutes avant

Contact : sylvie.leray@cea.fr Tel : 01 69 08 83 61
http://irfu-i.cea.fr/Phocea/Vie_des_labos/Seminaires/index.php