CENTRE D'ETUDES NUCLÉAIRES DE BORDEAUX-GRADIGNAN

Mardi 30 Août 2016

à **11H**

Un café sera servi à partir de 10h45

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Measurements of neutron-induced reactions in inverse kinematics

Neutron capture cross sections of unstable isotopes are important for neutron-induced nucleosynthesis as well as for technological applications. A combination of a radioactive beam facility, an ion storage ring and a high flux reactor would allow a direct measurement of neutron induced reactions over a wide energy range on isotopes with half lives down to minutes.

The idea is to measure neutron-induced reactions on radioactive ions in inverse kinematics. This means, the radioactive ions will pass through a neutron target. In order to efficiently use the rare nuclides as well as to enhance the luminosity, the exotic nuclides can be stored in an ion storage ring. The neutron target can be the core of a research reactor, where one of the central fuel elements is replaced by the evacuated beam pipe of the storage ring. Using particle detectors and Schottky spectroscopy, most of the important neutron-induced reactions, such as (n,γ), (n,p), (n,α), (n,2n), or (n,f), could be investigated.

Salle des Séminaires du CENBG

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