

# CENTRE D'ETUDES NUCLÉAIRES DE BORDEAUX-GRADIGNAN

**Lundi 24 Mars 2014**

**à**

**14H00**

*Un café sera servi à partir de 10h45*

**Elizabeth WILLIAMS**

Department of Nuclear Physics, The Australian National University,  
Canberra, Australie

## **The evolution of signatures of quasifission in reactions forming Curium**

Fusion is a delicate process, particularly when production of the heaviest elements is the aim. Quasifission—a fission-like reaction outcome that takes place over incredibly short ( $<10^{-20}$  s) timescales—is one of the most important competitors with fusion in reactions forming heavy (and superheavy) nuclei.

In this presentation, I will demonstrate how to take a 'snapshot' of quasifission processes that occur over zeptoseconds, show how quasifission probabilities and timescales relate to the selected reaction parameters, and provide experimental evidence of quasifission for reactions leading to isotopes of Curium using the Australian National University's large solid-angle CUBE detector array and 14UD heavy ion accelerator.

**Salle des Séminaires du CENBG**

*Le Haut Vigneau - BP 120 - F-33175 Gradignan Cedex*