



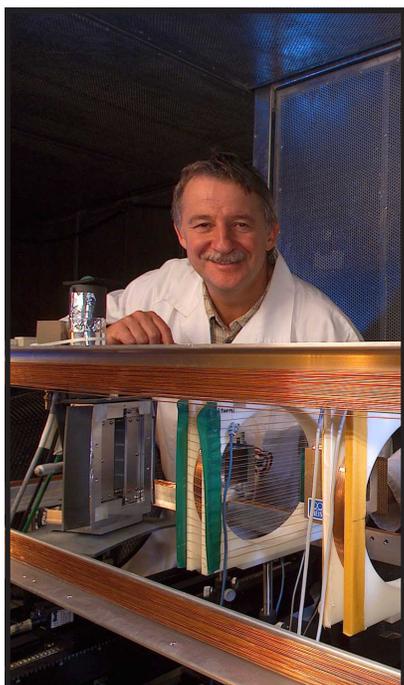
# PHYSICS COLLOQUIUM

## Richards Lecture

Friday, March 12, 2010 • 4:00 P.M. • 2241 Chamberlin Hall

cookies & coffee served at 3:30 p.m

# Probing Early Universe Particle Physics with Neutrons at the Institut Laue-Langevin

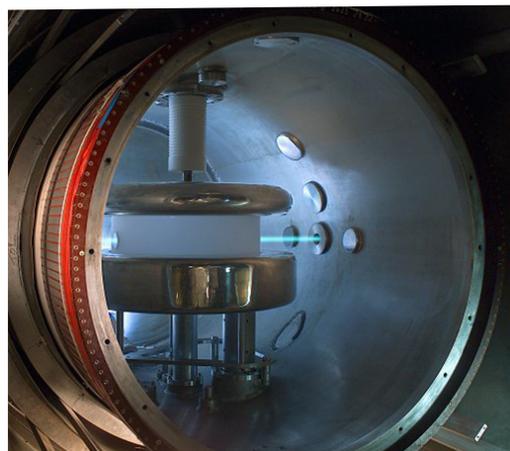


## Peter Geltenbort

Institut Laue-Langevin

Low energy experiments at the “precision frontier” provide a powerful probe of early universe. A brief introduction to the Institut Laue-Langevin (ILL) in Grenoble, France, which is a world leader in academic research with neutrons will be given.

The scope of fundamental physics studies with neutrons is outlined. The main instruments provided for such studies are described and some past and current flagship experiments with ultra-cold neutrons (UCN) in this field (lifetime, electric dipole moment, quantum states) are highlighted. A brief outlook on future projects is given.



### About the speaker

Peter W.H. Geltenbort received a Ph D from the University of Tuebingen, Germany, in 1983. He joined the Nuclear and Particle Physics (NPP) College at the ILL in 1983 responsible for a fission fragment spectrometer. From 1989 to 1993 he held the position of Head of the Detector Group. In 1993 he reintegrated into the NPP College responsible for the Ultra-Cold Neutron/Very Cold Neutron facilities at the ILL. His current research interests are the fundamental properties of the neutron.