

Invitation

LMU-Seminar

Title:High pressure at central facilities: Some applications of 'Paris-Edinburgh'
pressure devices for neutrons, x-rays and maybe muonsSpeaker:Prof. Stefan Koltz

Sorbonne Université, IMPMC, UMR 7590, 4 Place Jussieu, 75252 Paris, France.

Time: Tuesday, January 21st 2020, 14:00

Place: WWHB/106

Abstract:

High pressure experiments on central facilities require compact pressure devices which can be handled easily and which are compatible with low and high temperatures. The diamond anvil cell (DAC) is ideally suited for such purposes, but it provides only microscopic sample volumes and hence cannot be used for various applications, such as neutron scattering and x-ray radiography. Over the past 3 decades, the so-called 'Paris-Edinburgh' device has become a standard for high pressure experiments at neutron and x-ray facilities in the 10 GPa range, allowing sample volumes of typically 100 mm³. In this talk I will give an introduction to this technique and show various applications on central facilities worldwide. I will discuss the strengths and limits and will touch on potential applications for condensed matter research using muons.