

High pressure research at PSI using neutrons and muons

High pressure is an important pathway to access and understand the properties of materials as well as their various phases in the fields ranging from mineral physics inside the earth to cooperative many-body quantum phases emerging in crystals.

At PSI we combine the high-pressures with accelerator-based scattering and resonance methods in order to explore, understand and control these phases. In my talk I will introduce the high-pressure equipment that is available at PSI and discuss how it is coupled to the user programs in the muon and neutron sources. I will then present our recent developments in both hydrostatic and anisotropic pressure techniques that enabled us to expand the accessible parameter phases. Finally, recent scientific studies enabled by the high pressures will be highlighted.

Primary author: SIMUTIS, Gediminas (Paul Scherrer Institute)

Presenter: SIMUTIS, Gediminas (Paul Scherrer Institute)

Session Classification: Instruments