

HEIDI, instrument status and surprising phase transitions

Wednesday, 21 June 2017 11:00 (30 minutes)

The single crystal diffractometer HEIDI is jointly operated by RWTH Aachen, Institut für Kristallographie and the Jülich Centre for Neutron Science (JCNS). Using the hot source of FRM II the instrument covers a range of wavelengths between 1.17 Å down to 0.56 Å to study chemical and magnetic structures with high resolution (and large Q range respectively) using unpolarized neutrons. The talk will give an overview of the instrument including the current status of the BMBF funded project to optimize measurements on single crystal samples in the sub-millimeter range and first experimental results using the high temperature mirror furnace with gas handling option. In addition, some very recent and surprising experimental results concerning the temperature T and time t dependent order-disorder of H bonds in a small molecule and the not so obvious T dependent behaviour of incommensurate superstructure reflections in a multiferroic compound are presented.

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