



SENSE 2010

Superconductivity Explored by Neutron Scattering Experiments

Institut Laue-Langevin, Grenoble, France
21 - 23 October 2010



Scope

The microscopic origin of unconventional superconductivity continues to attract the attention of the condensed matter community. Whereas rare-earth / actinide-based intermetallic and copper oxide-based high temperature superconductors are studied for more than twenty years, the iron-based superconductors have been in the focus of interest since their recent discovery. Inelastic neutron scattering experiments have been of particular importance for the understanding of the magnetic and superconducting properties of these compounds. The purpose of the meeting is to bring together scientists working in the field and using neutron scattering techniques. This forum will review experimental achievements, recognize the observed commonalities and differences as well as discuss theoretical efforts to identify the symmetry of the superconducting order parameter in addition to the coupling mechanisms of the Cooper pairs. The meeting should be particularly beneficial to younger researchers as well as established scientists who wish to learn more about the latest scientific results.

Topics

The workshop will cover the different topics relevant for the study of unconventional superconductivity. Magnetization and lattice dynamics such as spin resonances, phonons, magnetic and other excitations as studied by spectroscopic methods will be presented. Investigations of (doping, pressure and magnetic field dependent) phase diagrams, electronic states as well as vortex physics by the various diffraction techniques will also be addressed.

General

The workshop is organized jointly by the Institut Laue - Langevin and its collaborating research groups from the CEA-Grenoble and JCNS. The workshop will start on Thursday morning October 21, 2010 and finish on Saturday lunchtime October 23, 2010. The workshop will be held 'on-site' at the Institut Laue - Langevin. The registration fee (~220 €) covers all local costs (accommodation, full board, proceedings). Transport is not included. For young scientists a reduced fee will be proposed.

Organization

Local organizing committee:

A. Hiess (ILL, Grenoble), S. Raymond (CEA, INAC, Grenoble), K. Schmalzl (FZ Jülich, JCNS at ILL)

International advisory committee:

W. Bao (Renmin Univ. Beijing, China),

P. Bourges (LLB, France),

C. Broholm (J. Hopkins Univ., USA),

E. Forgan (U. Birmingham, UK),

S. Hayden (U. Bristol, UK),

B. Keimer (MPI Stuttgart, Germany),

J. Mesot (PSI, Switzerland),

O. Stockert (MPI Dresden, Germany)

Secretary:

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Important dates

Second circular:

March 2010

Abstract and registration:

June 2010

Workshop:

Oct. 2010

Further information

Please visit our web site:

www.ill.eu/news-events/events/sense2010

Or contact the organizers directly:

sense@ill.eu

Sponsors:

