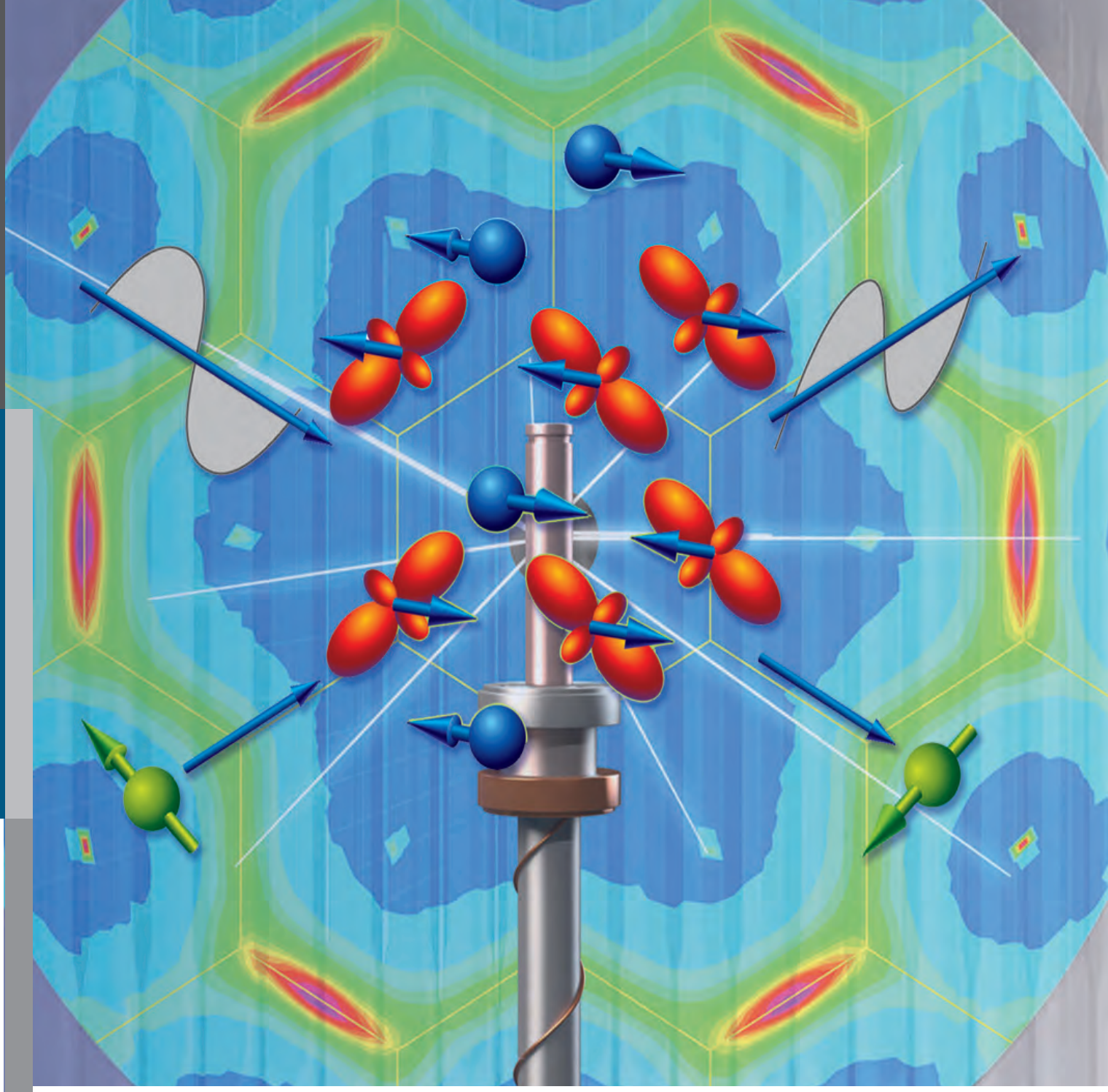


Member of the Helmholtz Association

JCNS Workshop 2013

Trends and Perspectives in Neutron Scattering: Magnetism and Correlated Electron Systems

Program

7 – 10 Oct. 2013, Tutzing **www.fz-juelich.de/jcns/JCNS-Workshop2013**

Jülich Centre for Neutron Science

Heinz Maier-Leibnitz Zentrum

JÜLICH FORSCHUNGSZENTRUM

Dear colleagues,

Neutron scattering has proven to be a key method for achieving deep insight into the physics associated with magnetic phenomena and correlated electrons. Our basic understanding of crucially important topics such as the magnetic structure of complex materials in bulk, thin films or nanoparticles, the mechanism behind magnetic phenomena and superconductivity, spin dynamics in highly correlated electron systems etc. depend on and benefit immensely from research with neutrons.

The workshop will bring experts together to address the following topics:

- **Magnetic Nanoparticles and Nanocrystals**
- **Molecular Magnets**
- **Highly Correlated Transition Metal Chalcogenides**
- **Unconventional Superconductors**
- **Magnetoelectrics, Multiferroics**
- **Frustrated and Complex Spin Systems**
- **Interface Effects in Heterostructures**
- **Materials for Energy Conversion and Storage**

During the next days about 40 invited and contributed presentations will be given and exciting posters will add additional information in the mentioned topics. We would like to believe that this workshop at a gorgeous site at the Starnberger See will advance the field and we are looking forward to fruitful discussions and to a stimulating exchange of knowledge.

Scientific Organizing Committee

Thomas Brückel Yixi Su

Presentation Schedule

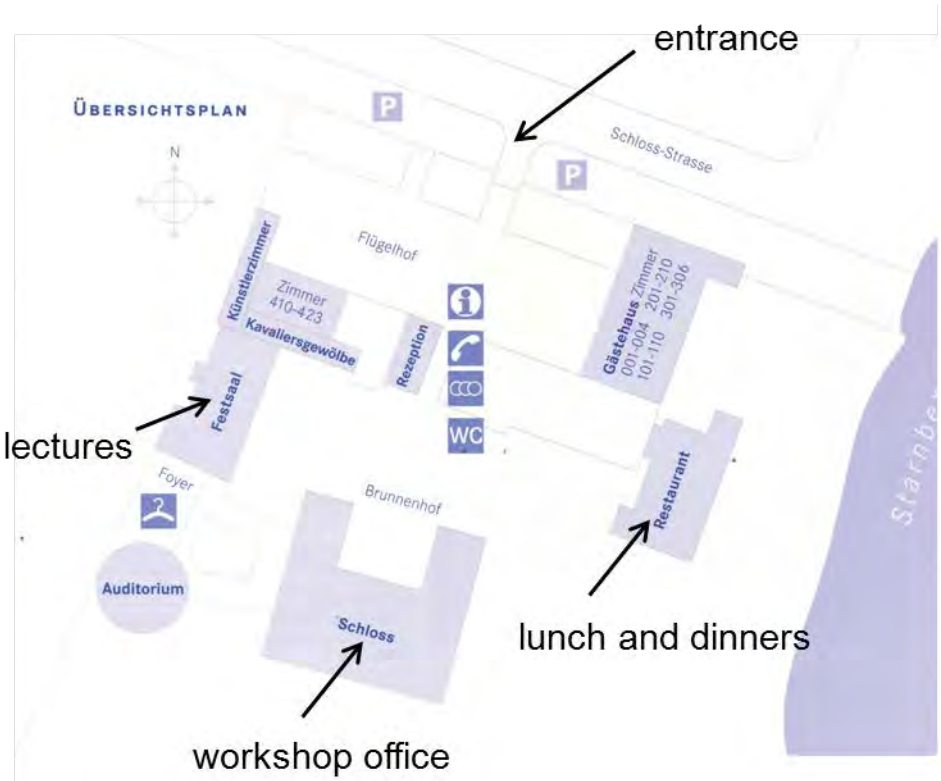
Program JCNS Workshop 2013 "Trends and Perspectives in Neutron Scattering: Magnetism and Correlated Electron Systems"

Monday, 7 October 2013		Tuesday, 8 October 2013		Wednesday, 9 October 2013		Thursday, 10 October 2013	
10:00	Registration	09:00	Gaulin	09:00	Bibes	09:00	Wiedenmann
		09:30	Bech Christensen	09:30	Fontcuberta	09:30	Michels
		09:50	Chakrabarty	10:00	Bernhard	10:00	Disch
		10:10	Häußler	10:30	Pavlenko	10:30	Petracic
		10:30	Coffee break	10:50	Coffee break	10:50	Coffee break
		11:00	Cermak	11:30	Brück	11:20	Kenzelmann
		11:20	Nemkovskiy	12:00	Hermann	11:50	Angst
		11:40	Sazonov	12:30	Voigt	12:20	Closing remarks
12:15	Lunch	12:00	Fu	12:50	Clementyev	12:30	Lunch
		12:20	Ioffe	13:10	Lunch		
13:15	Workshop Opening	13:00	Lunch				
13:30	Triscone	14:00	Gegenwart	14:30	Excursion		
14:00	Tonnerre	14:30	Inosov				
14:30	Röhlsberger	15:00	Demirdis		Bus tour to the Murnau Museum		
15:00	Lauter	15:20	Xiao				
15:30	Coffee break	15:40	Nandi				
16:00	Chapon	16:00	Coffee break				
16:30	Petricek	16:30	Schmalian	18:00	Workshop Dinner "Griesbräu" in Murnau		
17:00	Frontzek	17:00	Su				
17:20	Brandl	17:30	Hiess				
17:40	Nair	18:00	Poster Session				
18:30	Dinner	19:30	Dinner				

as of 2013-08-29

Evangelische Akademie Tutzing

Site Map



JCNS Workshop 2013

"Trends and Perspectives in Neutron Scattering: Magnetism and Correlated Electron Systems"

October 7-10, 2013, Tutzing

Program

Monday, October 7, 2013

13:15 Opening of the workshop and welcome

Interface Effects in Heterostructures

1 13:30 J.-M. Triscone, DPMC, University of Geneva, France (invited)
2-dimensional electron gases in oxide heterostructures

2 14:00 Jean-Marc Tonnerre, Institut Néel, CNRS and Université Joseph Fourier Grenoble, France (invited)
Depth-resolved magnetic profile in Fe ultrathin films on vicinal Ag substrate close to spin reorientation transition

3 14:30 Ralf Röhlsberger (invited)
Photon polarization precession spectroscopy: A new technique for the study of magnetic dynamics with x-rays

4 15:00 Valeria Lauter, Oak Ridge National Laboratory, USA (invited)
Interfacially-coupled epitaxial ferromagnetic oxide heterostructures studied by polarized neutron reflectometry

15:30 Coffee Break

Frustrated and Complex Spin Systems

5 16:00 Laurent Chapon, Institut Laue Langevin, Grenoble, France (invited)
tbd

6 16:30 Václav Petříček, Institute of Physics ASCR v.v.i., Prague, Czech Republic (invited)
How can we study magnetic structures with Jana2006?

7 17:00 Matthias Frontzek, Paul Scherrer Institut, Villigen, Switzerland
The multiferroic, geometric frustrated $CuCrO_2$ compound: interlayer exchange and domain formation

8 17:20 Georg Brandl, Heinz Maier-Leibnitz Zentrum (MLZ) and Physik-department E21, Technische Universität München, Garching, Germany
Investigation of helimagnon excitations in single-domain MnSi with the new triple-axis option on the spectrometer MIRA at the FRM II

9 17:40 Harikrishnan Nair, JCNS 2/PGI 4, Scattering Methods, Forschungszentrum Jülich, Jülich, Germany
The true magnetic ground state of frustrated A-site spinels: An approach using polarized neutrons

18:30 Dinner

Tuesday, October 8, 2013

Frustrated and Complex Spin Systems

10 9:00 Bruce D. Gaulin, McMaster University, Hamilton, Canada (invited)
Effective spin ½ Hamiltonians in XY pyrochlores and ground state selection via order-by-disorder in $Er_2Ti_2O_7$

11 9:30 Nils Bech Christensen, Technical University Denmark, Denmark
The case for magnon decay in the organic square lattice, spin ½ Heisenberg antiferromagnet $(5CAP)_2CuCl_4$

12 9:50 T. Chakarabarty, IIT Bombay, Powai Mumbay, India
BaV_3O_8: A possible Majumdar-Ghosh system with s=1/2

13 10:10 Wolfgang Häußler, Heinz Maier-Leibnitz Zentrum (MLZ) and Physik-department E21, Technische Universität München, Garching, Germany
Relaxation in the re-entrant spin glass $Fe_{14.5}Cr_{85.5}$

10:30 Coffee Break

Frustrated and Complex Spin Systems (continued)

14 11:00 Petr Čermák, Forschungszentrum Jülich, JCNS, Outstation at MLZ, Garching, Germany
Recent development in "218" Rh, Pd and Pt based heavy fermion compounds

15 11:20 Kirill Nemkovski, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
Interplay of low-energy phonons and magnetic excitations in Kondo insulator YbB_{12}: complementary neutron/synchrotron study

16 11:40 Andrew P. Szonov, RWTH Aachen, JCNS Outstation at MLZ, Garching, Germany
Low-temperature magnetic structure of the pyrochlore spin liquid $Tb_2Ti_2O_7$ under magnetic field H || [111]

17 12:00 Zhendong Fu, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
Coexistence of novel magnetic orders and spin-glass-like phase in pyrochlore antiferromagnet $Na_3Co(CO_3)_2Cl$

18 12:20 Alexander Ioffe, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
The JCNS instrument suite – an excellent set to investigate magnetic phenomena

13:10 Lunch

Unconventional Superconductors

19 14:00 Philipp Gegenwart, Georg-August-Universität Göttingen, Germany (invited)
Eu-based iron pnictide superconductors

20 14:30 Dmytro Inosov, Max-Planck-Institut für Festkörperforschung, Stuttgart, and Technische Universität Dresden, Dresden, Germany (invited)
Peculiar magnetism of iron pnictides aside from superconductivity

21 15:00 Sultan Demirdis, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
Electron irradiation of iron-based superconductors

22 15:20 Y. Xiao, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Magnetic anisotropic energy gap and low-energy spin wave excitation in the antiferromagnetic block phase of $K_2Fe_4Se_5$

23 15:40 S. Nandi, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Understanding the magnetism in $K_{0.8}Fe_{1.6}Se_2$

16:00 Coffee Break

24 16:30 Jörg Schmalian, Karlsruhe Institute of Technology, Germany (invited)
Nematic fluctuations and unconventional magneto-elastic coupling in iron based superconductors

25 17:00 Yixi Su, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
Magnetic anisotropy of low-energy spin excitations in iron pnictide superconductors

26 17:30 Arno Hiess, European Spallation Source, Lund, Sweden
Temperature and doping dependence of the spin dynamics in the cubic superconductor $U_{(1-x)}Th_xBe_{13}$

18:00 **Postersession**

19:30 Dinner

Wednesday, October 9, 2013

Interface Effects in Heterostructures

27 9:00 Manuel Bibes, Unité Mixte de Physique CNRS/Thales, Palaiseau, France, (invited)
Putting a strain on $BiFeO_3$

28 9:30 Josep Fontcuberta, Institut de Ciència de Materials de Barcelona (ICMAB-CSIC), Bellaterra, Catalonia, Spain (invited)
Engineering electronic occupancy at surfaces and interfaces of transition metal oxides

29 10:00 Christian Bernhard, University of Fribourg, Switzerland (invited)
The magnetic proximity effect in cuprate-high T_c/manganite multilayers studied by polarized neutron reflectometry and resonant x-ray techniques

30 10:30 Natalia Pavlenko, University of Augsburg, and Max-Planck-Institute of Solid State Physics, Stuttgart, Germany
Nanoscale magnetism and electronic phase separation at titanate interfaces

10:50 Coffee Break

Materials for Energy Conversion and Storage

31 11:30 Ekkes Brück, Delft University of Technology, The Netherlands (invited)
Magnetocaloric materials for cooling applications near room temperature

32 12:00 Raphael P. Hermann, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany (invited)
Lattice dynamics in thermoelectric skutterudites

33 12:30 Jörg Voigt, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Anisotropy of the magneto-caloric effect in single crystalline $MnFe_4Si_3$

34 12:50 Evgeny Clementyev, Institute for Nuclear Research RAS, Moscow, Russia
Volume collapse and valence instabilities in CeNi

13:10 Lunch

14:30 Excursion to the Schloss-Museum Murnau

18:00 Workshop dinner in the "Griesbräu" in Murnau

Thursday, October 10, 2013

Magnetic Nanoparticles and Nanocrystals

35 9:00 Albrecht Wiedenmann, Institut Laue Langevin, Grenoble, France (invited)
Magnetic nanomaterials studied by innovative small angle neutron scattering techniques

36 9:30 Andreas Michels, University of Luxembourg, Luxembourg (invited)
Magnetic SANS on nanomagnets

37 10:00 Sabrina Disch, Institut Laue Langevin, Grenoble, France (invited)
Polarized (GI)SANS by iron oxide nanocubes and their assemblies

38 10:30 Oleg Petracic, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Structural and magnetic correlations of self-assembled nanoparticle superlattices

10:50 Coffee Break

Magnetoelectrics and Multiferroics

39 11:20 Michel Kenzelmann, Paul Scherrer Institut, Villigen, Switzerland (invited)
tbd

40 11:50 Manuel Angst, Jülich Centre for Neutron Science and Peter Grünberg Institut, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Neutron scattering on Rare Earth Ferrites

12:20 **Closing remarks, end of the workshop**

12:30 Lunch

Poster Presentations

2013-1
Alice Klapper, JCNS-2/PGI-4, Forschungszentrum Jülich, Jülich, Germany
Structural and magnetic properties of FePt@MnO heterodimer nanoparticles and their self-assembly

2013-2
Nicolò Violini, Jülich Centre for Neutron Science, Forschungszentrum Jülich, Jülich, Germany
T-REX: A Time-of-flight Reciprocal space Explorer for the future ESS source

2013-3
Artem Feoktystov, Jülich Centre for Neutron Science at MLZ, Forschungszentrum Jülich, Garching, Germany
Detailed SANS contrast variation in toluene-based Co ferrofluid

2013-4
Pavlo Portnichenko, Institut für Festkörperphysik, TU Dresden, Dresden, Germany
Disperse magnon excitations in $Ca_3Co_2O_6$

2013-5
Robert J. Aldus, Jülich Centre for Neutron Science at MLZ, Forschungszentrum Jülich, Garching, Germany
The magnetic properties of $Nd_2Sn_2O_7$, a candidate of quantum spin liquid, at temperatures as low as 2 K

2013-6
Milan Klicpera, Department of Condensed Matter Physics, Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic
Structural and electronic properties of $CeCuAl_3$ single crystal and vibron states in $Ce(Cu,Al)_4$ compounds

2013-7
Vinod Kumar, Department of Physics, National Institute of Technology, Hamirpur (H.P.), India
Magnetic properties of $LaCo_{1-x}Ni_xO_3$ (x=0, 0.1, 0.2, 0.4)

2013-8
Johannes Reim, Jülich Centre for Neutron Science JCNS-2 and Peter Grünberg Institut PGI-4, Forschungszentrum Jülich, Jülich, Germany
Long range incommensurable spin ordering in a swedenborgite compound

2013-9
Kirill Nemkovski, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
DNS – a versatile diffuse neutron scattering spectrometer with polarization analysis at FRM II: towards enhanced count rate and extended Q-range

2013-10
Wentao Jin, Jülich Centre for Neutron Science JCNS-2 and Peter Grünberg Institut PGI-4, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Field-induced spin reorientation in $EuFe_2(As_{0.85}P_{0.15})_2$ revealed by resonant magnetic x-ray scattering

2013-11
Martin Meven, Institut für Kristallographie, RWTH Aachen and JCNS at MLZ, Forschungszentrum Jülich, Garching, Germany
Single crystal diffraction studies on new magnetic and superconducting compounds with HEiDi

2013-12
Koji Kaneko, Quantum Beam Science Directorate, Japan Atomic Energy Agency, Ibaraki, Japan
Presence of chiral character in the spin resonance of the unconventional superconductor $CeCoIn_5$

2013-13
Dmitry Trunov, NRC "Kurchatov Institute", Department of condensed matter physics, Moscow, Russia
Magnetic excitation in intermediate-valence $EuCu_2Si_2$

2013-14
Karin Schmalzl, Jülich Centre for Neutron Science, Forschungszentrum Jülich, Outstation at ILL, Grenoble, France
Effects of magnetic order and lattice dynamics in $CuCrS_2$

2013-15
Vladimir Hutanu, Institut für Kristallographie, RWTH Aachen and JCNS at MLZ, Forschungszentrum Jülich, Garching, Germany
Detailed investigation of magnetic structure in peculiar multiferroic $Ba_2CoGe_2O_7$

2013-16
Sabine Pütter, Forschungszentrum Jülich, JCNS at MLZ, Garching, Germany
Fabrication of transition metal oxide thin films by molecular beam epitaxy: New offer for users of the Heinz Maier-Leibnitz Zentrum at the FRM II

2013-17
Markus Waschk, Jülich Centre for Neutron Science JCNS-2 and Peter Grünberg Institut PGI-4, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Interface induced magnetism in $[LaMnO_3/SrMnO_3]_N$ heterostructures

2013-18
Markus Schmitz, Jülich Centre for Neutron Science JCNS-2 and Peter Grünberg Institut PGI-4, JARA-FIT, Forschungszentrum Jülich, Jülich, Germany
Electrically induced magnetic transition at the LSMO/BTO interface