

International Conference on Neutron Scattering

München, 9 – 13 September 2001

Conference Programme and Abstracts

Organized by: Technische Universität München
in collaboration with
European Neutron Scattering Association

Conference Programme
and Abstracts
ICNS2001, München
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CONTENTS

Welcome	v
Conference Committees	vii
Financial Support	ix
Industrial Exhibition	x
Conference Site	xi
Restaurant Guide	xii
Conference Programme	xv

Abstracts

Plenary talks	1
Oral Presentations	3
T Low Dimensional and Quantum Spin Systems	
T Methods and Instrumentation I	
T Materials in Motion	
T Complex Fluids	
MS Magnetic Thin Films and Multilayers	
MS Hydrogen Atoms in Biological Function	
T Bulk Polymers	
T Magnetic Structure and Dynamics I	
T Methods and Instrumentation II	
T Hydrogen in Materials	
T Molecules under Restraint	
MS Spin, Charge and Orbital Degrees of Freedom in Perovskites and Related Compounds	
MS Optimization of Neutron Devices by Simulation	
MS Industrial Applications of Neutron Scattering	
T Biological Systems I	
T Biological Systems II	
MS Charge, Lattice and Isotope Effects in High-Tc Superconductors	
MS Instrumentation at Advanced Pulsed Neutron Sources	
T Frustrated Magnets	
T Polymer Solutions	
T Organic Molecules	
T Interfaces and Confined Systems	
T Magnetic Structure and Dynamics II	
T Unusual Material States	
T Glasses and Liquids	
Poster Session A	50
Poster Session B	100
Poster Session C	200
Authorindex	300

Welcome

It is my pleasure to welcome you to the 2001 International Conference on Neutron Scattering, which is organised by the Technische Universität München in collaboration with the European Neutron Scattering Association. This conference follows the tradition established by previous meetings ICNS'97 in Toronto, ICNS'94 in Sendai, ICNS'91 in Oxford, ICNS'88 in Grenoble, ICNS'85 in Santa Fe and ICNS'82 in Hakone. The ICNS2001 provides an international forum for the presentation and discussion of recent developments in neutron sources, the technique of neutron scattering and their applications to physics, chemistry, biology, material sciences and industry. The conference intends to bring together scientists using neutrons and instrumentation specialists.

ICNS2001 takes place in the main buildings of the Technische Universität München in the center of Munich. On Wednesday September 12, 2001 the conference will move to the campus in Garching located some 10 Kilometers north of Munich. The campus at Garching was initiated by the first German neutron source, the FRM which went into operation 1957. Some 40 years later the Technische Universität intends to take into operation a new high flux neutron source, the FRM-II which can be visited on Wednesday afternoon.

A few things have changed with respect to previous meetings: Mini Symposia focus on particular aspects in research with neutrons. On Tuesday evening Prof. Jane Brown will be awarded the Walter Hälg prize for her pioneer work done in magnetism revealed by neutrons. The Wednesday session is devoted to the upcoming new high flux neutron sources and the business of the three continental user organisations for Europe, America and the Asia/Pacific region. The conference organisers have devoted special efforts to encourage and facilitate the participation of young scientists from all over the world and scientist from east Europe. We have offered financial assistance to 150 of these scientists to attend the conference. Young scientist (PhD students) have to pay only half of the conference fee. All participants will receive the proceedings. Several prizes for young authors presenting the best contributed papers will be awarded at the end of the conference.

All this has been made possible through the generous financial support by public funding, the major European neutron sources, industrial sponsors and fees paid for the industrial exhibition. Our sincere thanks is extended to all these contributors. We have listed the names of the sponsors in this booklet. I also wish to express my gratitude and thanks to all those members especially those of my chair E13, FRM-II and E21 who have worked together in making the ICNS2001 a success.

Munich also offers a great variety of cultural and social attractions. Some examples are visiting a Munich opera or concert, guided tours to the various museums near the conference site, tours to the castles of King Ludwig II of Bavaria and last but not least a visit in one of the numerous beer gardens. In spite of the intense scientific programme of the conference we hope all participants and accompanying persons will find the time to profit from some of these attractions.

We wish to commemorate the death of two prominent members of our community: Prof. Hans Maier Leibnitz, founder of the worlds famous neutron source, the Institut Laue Langevin, who died on December 16, 2000 and Prof. Clifford G. Shull, the 1994 Nobel Prize Winner in Physics and pioneer in neutron diffraction, who died on April 1, 2001. Both were leaders in the innovative use of neutrons for material science.

Winfried Petry
Chairman of ICNS2001

Honorary Chairman: Wolfgang Gläser

Local Organising Committee

Chairman	Winfried Petry	Physik Department E13 and FRM-II
Scientific Secretaries	Andreas Meyer Jürgen Neuhaus	Physik Department E13 FRM-II
Treasurers	Andreas Magerl Andreas Meyer	Universität Erlangen Physik Department E13
Secretaries	Edith Lubitz Cornelia Simon Evelyn Doll Waltraud Wittowetz	Physik Department E13 Physik Department E13 FRM-II FRM-II
Proceedings	Peter Müller-Buschbaum Peter Böni Andreas Meyer Jürgen Neuhaus Winfried Petry Erich Steichele	Physik Department E13 Physik Department E21 Physik Department E13 FRM-II Physik Department E13 and FRM-II Physik Department E21

Assisted by the staff of the Physics Department E13 and E21 and the FRM-II.

International Programme Committee

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D. Richter	Germany
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F. Leclercq	France	Ch. Vettier	France
C. Majkrzak	USA	J. White	Australia

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Public Funding

Bundesministerium für Bildung und Forschung BMBF, (German Ministry of Education and Research)
Deutsche Forschungsgemeinschaft DFG, (German Research Society)
Technische Universität München TUM
Bayerisches Staatsministerium für Forschung, Wissenschaft und Kunst, (Bavarian States Ministry of Research, Science and the Arts)
Deutsche Gesellschaft für Kristallographie DGK, (German Society of Crystallography)

Research Centers

Neue Forschungs-Neutronenquelle FRM-II, Garching, Germany
Forschungszentrum Jülich, Germany
Hahn–Meitner–Institut Berlin, Germany
Institut Laue–Langevin, Grenoble, France
ISIS Rutherford–Appleton Laboratory, Oxford, UK
Laboratoire Léon Brillouin, Saclay, France
Paul Scherrer Institut, Villigen, Switzerland
GKSS–Forschungszentrum Geesthacht, Germany
Institute for Energy Technology, Kjeller, Norway
The Studsvik Neutron Research Laboratory NFL, Sweden
Interfaculty Reactor Institute, Delft, The Netherlands
Los Alamos Neutron Science Center, USA

Industry

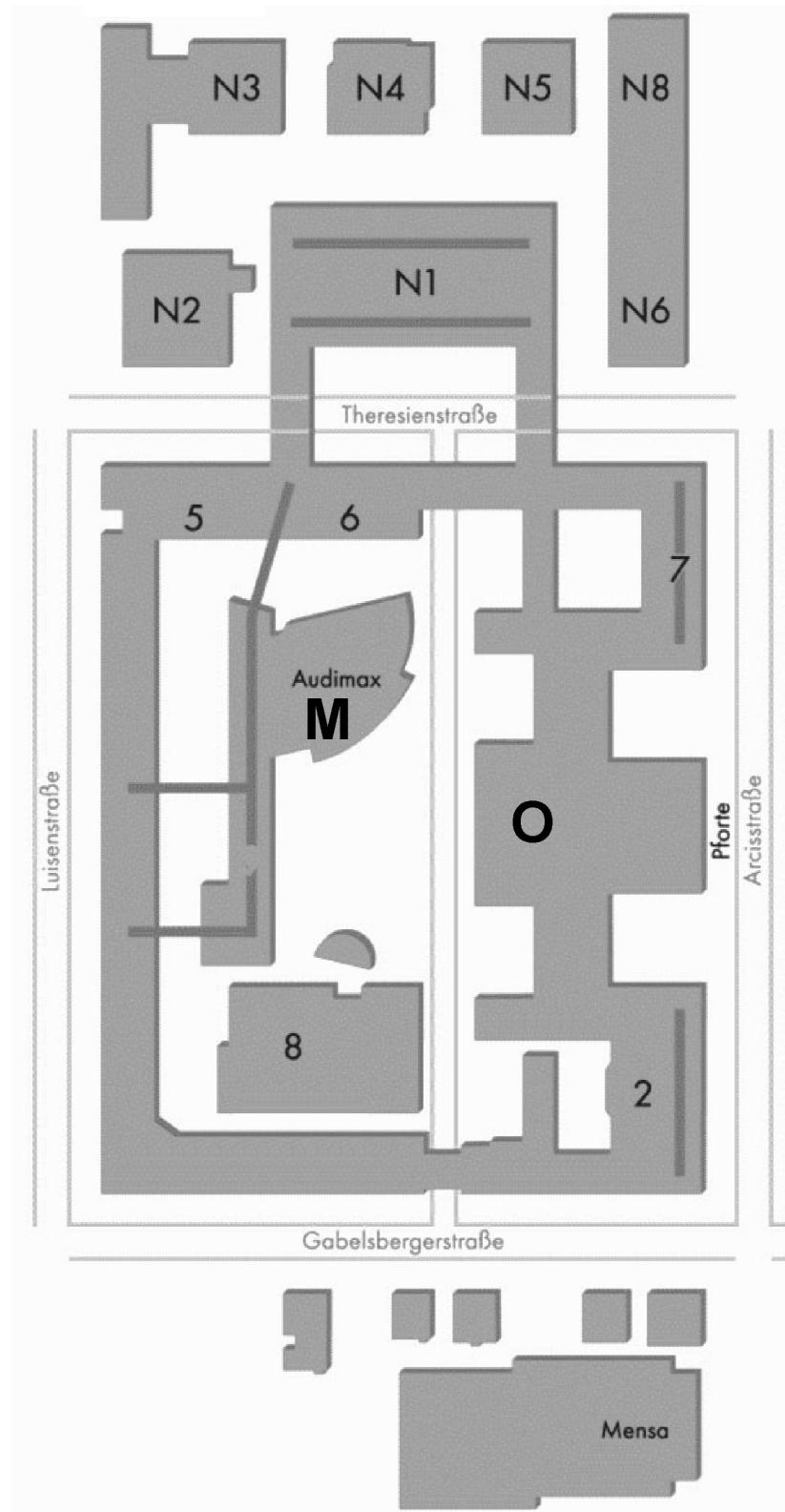
E.ON Energie AG, München, Germany
Siemens / Framatome ANP, Erlangen, Germany
MOWO Maschinenbau GmbH, Berlin, Germany
Fujitsu – Siemens, Augsburg, Germany
MICROSTAXX, München, Germany
Wacker – Silitronic, Burghausen, Germany

Industrial Exhibition

An industrial exhibition is located in the “Immatrikulationshalle” near the Conference Office and the Internet Café. The exhibition is open from Monday to Tuesday and on Thursday from 9:00 to 19:00.

A. S. Scientific Products LTD	Oxford	U.K.
Astrium	Friedrichshafen	Germany
Thermo Reax / Thermo Eberline	Santa Fe, NM	USA
Swiss Neutronics	Klingnau	Switzerland
Huber Diffraktionstechnik GmbH	Rimsting	Germany
iseg Spezialelektronik GmbH	Groerkmannsdorf	Germany
SIS Struck Innovative Systeme GmbH	Hamburg	Germany
Oxford Instruments GmbH	Wiesbaden	Germany
EURISYS MESURES	ST Quentin Yvelines Cedex	France
Advanced Ceramics Corporation	Obertshausen	Germany
MTF - Technologie-Transfer GmbH	Berlin	Germany
nob Neutron Optics Berlin	Berlin	Germany
NTK Neutronen Technische Komponenten	Bad Wrishofen	Germany
S-DH Sputter-Dünnenschichttechnik GmbH	Heidelberg	Germany

Conference Sites



O:

Conference Office
Editorial Office
Presentation Research Facilities
Industrial Exhibition
Internet Café

M:

Audimax (Main Lecture Hall)
Foyer Audimax: Coffee Breaks

N1:

Lecture Halls: N1190, N1189, N1179
Poster Sessions

Restaurant Guide

The list below contains some of the numerous restaurants, bars and cafes in the Schwabing area that are in easy walking distance from the conference site. Their location can be found on the map according to the numeration. Prices are in DM; S = Starter; M = Main course; P = Pizza; L = Lunch specials.

Mensa

This is the students' refectory of the Technische Universität. ICNS participants can purchase a lunch ticket for a complete meal including a soft drink (**11 DM**) at the confence desk. The Mensa is situated near the main university building (see map).

Bavarian Pubs

- 1 *La Grimace*, Gabelsberger Str. 24
Student pub very nearby, reasonable bar food
S: 6-12 DM, M: 10-20 DM, P: 9-15 DM
- 2 *Steinheil 16*, Steinheilstr. 16
Student pub with very large Schnitzels
S5-17 M10-20
- 3 *Mayer-Murr*, Augustenstr. 66
Butchery with excellent Bavarian snacks
L3-12 Salad bar by weight
- 4 *Vinzenz-Murr*, Schellingstr. 21
Butchery with excellent Bavarian snacks
L3-12 Salad bar by weight
- 5 *Stadtgespräch*, Augustenstr. 53 II
Excellent and reasonably priced Bavarian food
S6-16 M13-24
- 6 *Mac Donald's*, Augustenstr. 53 I
No comment
- 7 *Bar Celona*, Theresienstr. 38
Bar and Snack bar
L8-16
- 8 *Harlekin*, Theresienstr. 130
Bar with atmosphere, Bavarian dishes
with good volume/price ratio
S7-12 M15-17
- 9 *Engelsburg*, Türkenstr. 49
Traditional pub with atmosphere
Bar food 8-12
- 10 *Atzinger*, Schellingstr. 9
Student pub with Bavarian bar food,
“sehr gemütlich” Bar food 5-18

Italian

- 11 *Bei Raffaele*, Luisenstr. 47
Reputable italian food, good and large pizza
S13-16 M19-32 L10-19 P16-20
- 12 *Bistro L'Angolino*, Enhuberstr. 1
Unsophisticated but fresh food, quick service
S9-16 M23-31
- 13 *Trattoria La Perla*, Luisenstr. 75
Good italian food
S9-14 M22-27 P9-17
- 14 *Osteria Italiana*, Schellingstr. 62
Reputable italian cuisine (not for a quick meal)
S13-22 M38-92 Menu 4 courses 82
- 15 *Milano*, Theresienstr. 40
Italian fast food
L3-10

16 *Foro Romano*, Theresienstr. 29

Large italian restaurant
S11-16 M23-35 P 9-17

17 *Cinecitta*, Theresienstr. 144

Italian food with reasonable prices
S12-22 M17-31 P10-17 L12-18

18 *Mulino*, Görresstr. 1

Good italian food
S12-22 M17-31 P10-17

Greek

19 *Giorgios*, Steinheilstr. 10

S5-9 M13-26

20 *Bei Meri*, Theresienstr. 56

Greek fast food
S5-6 M5-12

21 *Taverna Olympos*, Türkenstr. 38

S6-17 M18-32

22 *Mykonos-Gonia*, Hess-Str. 51

S2-15 M14-33 L10-15

Jewish

23 *Cohen's*, Theresienstr. 31

Fine Jewish specialities, very nice atmosphere
Kosher food must be ordered in advance Tel. 280 95 45
S9-12 M17-23

Turkish

24 *Aziz*, Theresienstr. 91

Turkish fast Food (Döner)
L6-15

25 *Sezgin*, Türkenstr. 21

Turkish fast Food (Döner)
L6-15

Cafes

26 *Tresznewski*, Theresienstr. 72

Brasserie just opposite the Alte Pinakothek
Nice snacks 10-24 L22-30

27 *Cafe Puck*, Türkenstr. 33

Breakfast until 5 pm, happy hour 8:30 pm
Bar food 10-30

28 *Cafe Alt-Schwabing*, Schellingstr. 56

Bar food S7-12 M14-18

29 *News Bar*, Amalienstr. 55

Scene Cafe/Bar
Bar food 7-16

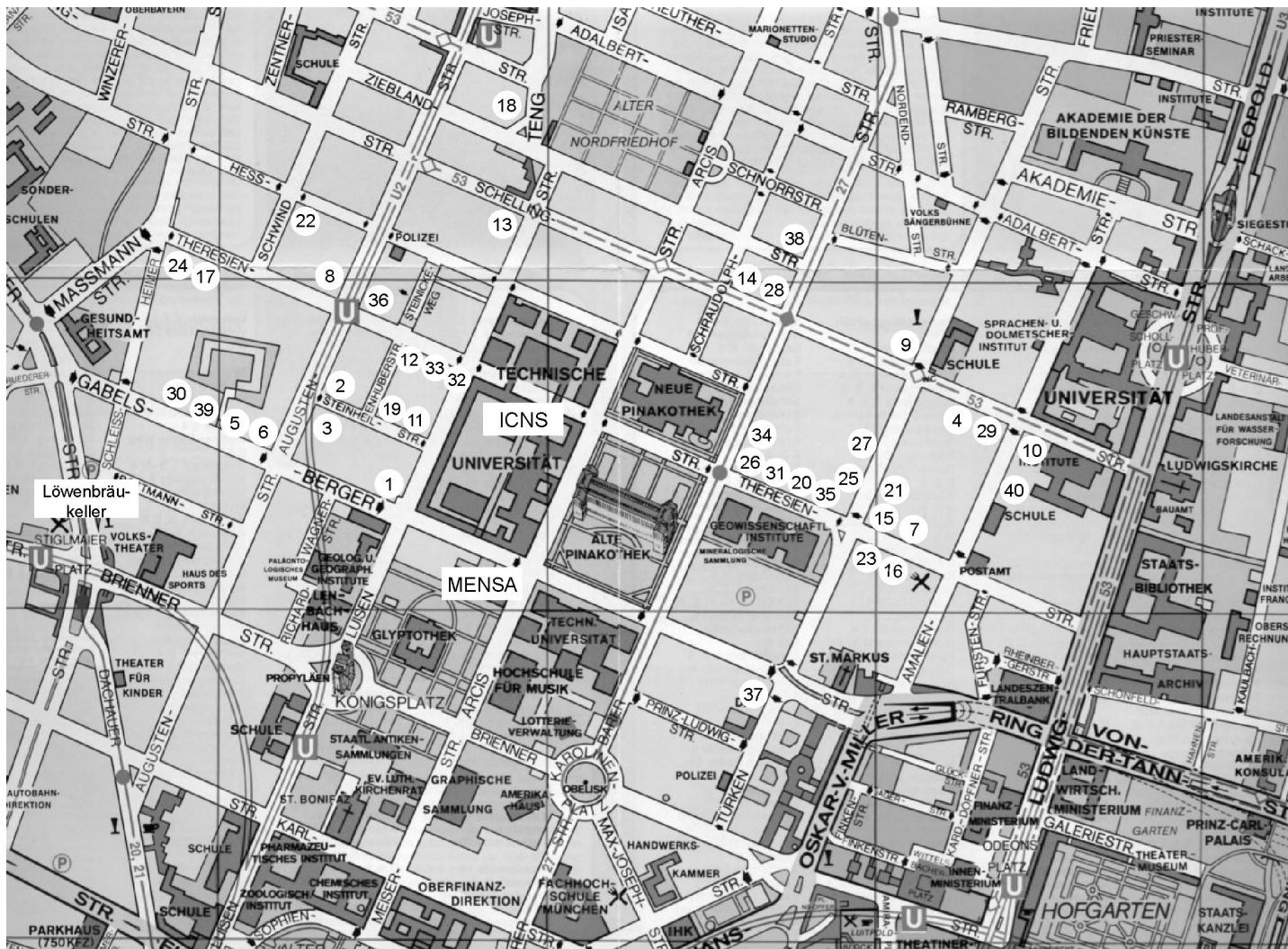
Kroatian

- 30 *Zadar*, Gabelsbergerstr. 58
S4-10 M10-25

Asian

- 31 *Cyclo*, Theresienstr. 70
Vietnamese
S5-16 M20-28 L10-12
- 32 *Kaito*, Theresienstr. 47
Traditional Sushi place with a vast fish supply
S9-38 M12-45
- 33 *Canton* Theresienstr. 49
Chinese food
S5-15 M17-22 L10-18
- 34 *Deeba*, Barer Str. 42
Very small Pakistani Restaurant with excellent food
Reservations recommended: Tel 28 34 07
S7-15 M20-38 L13-16

- 35 *Tokami Sushi*, Theresienstr. 54
High-standard Sushi bar, lunch specials
S8-32 M35-60 L30-34
- 36 *Shiva*, Augustenstr. 96
Excellent Indian food
S4-10 M17-27 L11-16
- 37 *Chao Khun*, Türkenstr. 9
Thai food.
After midnight disco and karaoke
S12-28 M12-35 L13-17
- 38 *India Town*, Barer Str. 67
Indian fast food
S3-11 M10-13
- 39 *Cafe Campanula*, Gabelsbergerstr. 46
Euro-Japanese
S7-13 M11-19
- 40 *Zum Koreaner*, Amalienstr. 46
Korean fast food
L8-12



On Wednesday September 12, 19:00, Conference Dinner at the Löwenbräukeller (Stiglmaierplatz)

Conference Programme

The ICNS 2001 provides an international forum for the presentation and discussion of recent developments in neutron sources, the techniques of neutron scattering and their application to physics, chemistry, biology, materials science and industry.

The scientific programme includes Plenary Lectures (**P**) as well as Topical Session (**T**). In addition, there are eight Mini Symposia (**MS**) focussing on particular and relevant topics. The Mini Symposia and the Topical Sessions are held in four parallel sessions followed by a poster session. All Plenary Lectures are in the main lecture hall, the Audimax.

The sessions cover the following topics:

Advanced Neutron Sources

Neutron Instrumentation

Soft Condensed Matter

Magnetism

Materials Science

Biology

Chemistry

Industrial Applications

On Wednesday September 12th the conference takes place at the campus in Garching, where the FRM-II is located as well. The sessions are held in the main lecture hall (MW2001) of the Engineering Department (Fakultät für Maschinenwesen). There is a bus transfer from the main campus in Munich / Arcisstrasse to the Garching campus.

On Wednesday afternoon the programme offers two alternative tours, either a tour of the FRM-II or the conference excursion to Herrenchiemsee – one of the famous King Ludwig II castles.

The FRM-II is ready for taking up nuclear operation. We are now awaiting the final license for nuclear operation still within this year. A central part of the FRM-II tour is a detailed presentation of the status of the innovative instrumentation in the reactor hall and the neutron guide hall.

Satellite Conferences

28th International Conference on
Dynamical Properties of Solids (DYPROSO XXVIII)
16-20 September 2001, Kerkrade, The Netherlands

ESF Exploratory Workshop on
Time-resolved Investigations of Structural Changes in Soft and Solid Matter with Neutrons and X-rays
5-7 September 2001, Berlin, Germany

The XIth International Workshop on
Quantum Atomic and Molecular Tunelling in Solids (QAMTS 2001)
5th- 8th September 2001, Nottingham, UK

Sunday

- 15:00 – 19:00 **Registration**
 17:00 – 19:00 **Reception** (Foyer Audimax)

Monday

08:00	Registration			
08:45	Welcome: W. Petry (Chairman), W. Hermann (President Technische Universität München), H. Zehetmair (Bavarian States Minister for Science, Research and the Arts)			
09:00	P A. Zheludev, <i>Interacting Quantum Spin Chains</i>			
09:45	P G. Zaccai, <i>Neutrons in the Post–Genome Sequencing Era</i>			
10:30	Coffee break, Registration			
11:00	T Low Dimensional and Quantum Spin Systems	T Methods and Instrumentation I	T Materials in Motion	T Complex Fluids
12:30	Lunch, Registration			
14:00	MS Magnetic Thin Films and Multilayers	MS Neutrons and High-Energy X-Rays in Materials Science	MS Hydrogen Atoms in Biological Function	T Bulk Polymers
15:30	Coffee break			
16:00	MS continuation	MS continuation	MS continuation	
17:00- -19:00	Poster Session A			
19:00	EU Facilities Users Meeting (Audimax)			

Tuesday

09:00	P T. Hashimoto, <i>Neutron Scattering Studies of Hierarchy Structure and Interphase Scattering in Phase-Separating Binary Mixtures</i>			
09:45	P S. Hayden, <i>Novel Magnetic Excitations in Metals and Superconductors</i>			
10:30	Coffee break			
11:00	T Magnetic Structure and Dynamics I	T Methods and Instrumentation II	T Hydrogen in Materials	T Molecules under Restraint
12:30	Lunch			
14:00	MS Spin, Charge and Orbital Degrees of Freedom in Perovskites and Related Compounds	MS Optimization of Neutron Devices by Simulation	MS Industrial Applications of Neutron Scattering	T Biological Syst. I
15:30	Coffee break			
16:00	MS continuation	MS continuation	MS continuation	T Biological Syst. II
17:00	Poster Session B			
19:00	Sandwiches and Refreshments (Foyer Audimax)			
20:00	Walter Hälg Prize, Award and Lecture (Audimax)			
	J. Brown, <i>Polarised Neutrons: An ideal tool for magnetic crystallography</i>			

Wednesday (Garching)

Group I

- | | | | |
|-------|---|-------|-----------------------------|
| 13:00 | Lunch | 13:00 | Conference Excursion |
| 14:00 | FRM-II Tour | | Herrenchiemsee |
| 19:00 | Conference Dinner: Löwenbräukeller (Stiglmaierplatz, see map on page xiii) | | |

Group II

- 13:00 Conference Excursion:
Herrenchiemsee**

Thursday

- | | | | | |
|-------|--|--|------------------------------|--|
| 09:00 | MS Charge, Lattice and Isotope Effects in High-<i>T_c</i> Superconductors | MS Instrumentation at Advanced Pulsed Neutron Sources | T Frustrated Magnets | T Polymer Solutions |
| 10:30 | Coffee break | | | |
| 11:00 | MS continuation | MS continuation | T Organic Molecules | T Interfaces and Confined Systems |
| 12:30 | Lunch | | | |
| 13:30 | T Magnetic Structure and Dynamics II | T Unusual Material States | T Glasses and Liquids | |
| 15:00 | Poster Session C | | | |
| | 15:15 – 16:15 Coffee
(Foyer Audimax) | | | |
| 17:30 | P H. Schober, From Zero to Three Dimensions: Solid State Polymerization in Fullerenes | | | |
| 18:15 | P T. Holden, Advancing Neutron Diffraction as a Tool for the Engineer | | | |
| 19:00 | Young Scientists Award | | | |
| | Conclusion | | | |

Monday September 10, 2001

Low Dimensional and Quantum Spin Systems

Audimax

- 11:00 L. Regnault, *Polarimetric neutron-scattering study of the optic mode in the spin-peierls compound CuGeO₃*
 11:15 L. Chapon, *Structural and magnetic properties of the quasi-1D and 2D molecular magnets Cu(NCS)2pyz and Fe(NCS)2pyz*
 11:30 M. Kohgi, *Neutron Scattering Studies of the One-Dimensional Quantum Spin Magnetism in Yb₄As₃*
 11:45 C. Rüegg, *Spin dynamics in the high-field phase of quantum critical S=1/2 TlCuCl₃*
 12:00 R. Coldea, *Excitations of a 2D frustrated quantum magnet in the high-field ferromagnetic phase*
 12:15 K. Kakurai, *Spin Excitations in the 2D orthogonal-dimer system SrCu₂(BO₃)₂*

Methods and Instrumentation I

N 1190

- 11:00 M. Rekveldt, *Overview New Larmor Precession Techniques*
 11:30 C. Majkrzak, *Advances in Specular Neutron Reflectometry*
 12:00 D. Hussey, *Simultaneous Polarization Analysis of Zeeman Splitting in Polarized Neutron Reflectometry using a Polarized ³He Neutron Spin Filter*
 12:15 A. Wagh, *First realization of Bonse-Hart angular profiles for multiple Bragg reflections*

Materials in Motion

N1189

- 11:00 C. Tulk, *The Low Frequency Density of States for Amorphous and Crystalline Ice Phases*
 11:30 M. Anne, *Static and Dynamic Studies of the Fast Silver Ion Conductor Ag₇GeSe₅I by Neutron Scattering*
 11:50 B. Winn, *Anomalous Phonon Damping in the High Temperature Shape Memory Alloy Ti₅₀Pd₄₂Cr₈*
 12:10 M. Aroyo, *Inelastic Neutron Scattering Selection Rules for Phonons: Application to Leucite Phase Transition*

Complex Fluids

N1179

- 11:00 H. Endo, *Amphiphilic Block Copolymers as Efficiency Boosters in Microemulsions: A Two Dimensional Contrast Variation SANS Investigation of The Role of Polymers*
 11:30 M. Monkenbusch, *Neutron Spin-Echo Investigation of the membrane dynamics in bicontinuous microemulsions*
 11:45 M. Gradzielski, *Additives of Intermediate Polarity - Their Location in Amphiphilic Aggregates and Their Influence on the Corresponding Structures*
 12:00 P. Thiagarajan, *Influence of Carbonate Ions on the Micellization and Phase Separation in Triblock Copolymer Solutions*
 12:15 S. Vass, *Sequence-Dependent Hydration Properties of Ionic ABA and BAB Triblock Copolymer Micelles from SANS.*

Mini Symposium: Magnetic Thin Films and Multilayers

Audimax, Conveners: C. Majkrzak, H. Zabel

- 14:00 V. Leiner, *Tuning of Exchange Coupling in Ho/Y Superlattices with Deuterium*
 14:30 H. Kepa, *Polarized Neutron Reflectometry Studies of GaMnAs/GaAs Superlattices*
 15:00 A. Hoffmann, *Observing a Frozen Ferromagnetic Moment in the Antiferromagnet of an Exchange Bias System*
 15:30 Coffee Break
 16:00 S. te Velthuis, *Magnetic Profiles and Coupling in Fe/Cr (110) Superlattices*
 16:30 B. Toperberg, *Off-Specular Polarized Neutron Scattering from Magnetic Fluctuations in Films and Multilayers*

Mini Symposium: Neutrons and High-Energy X-Rays in Materials Science

N1190, Conveners: P. Fratzl, H. F. Poulsen

- 14:00 H. Poulsen, *3DXRD: A New Tool for Bridging the Length Scales in Materials Science*
 14:25 H. Reichert, *Diffuse Scattering Experiments Using High-Energy X-rays and Neutrons*
 14:50 D. Price, *Complementary X-Ray and Neutron Measurements on Contained and Levitated Liquids*
 15:15 J. Strempfer, *Magnetic Moment Determination by the Complementary Methods of High-Energy Magnetic X-Ray and Magnetic Neutron Diffraction*
 15:30 Coffee Break
 16:00 W. Reimers, *Capabilities of Neutrons and High Energy X-Rays for Materials Science*
 16:25 M. Kaiserlmayr, *Scattering of Neutrons and Photons – Complementary Methods for Diffusion Studies*
 16:50 S. Hosokawa, *Collective Dynamics of Liquid Hg Investigated by Inelastic X-Ray Scattering*

Mini Symposium: Hydrogen Atoms in Biological Function

N1189, Conveners: D. Myles, N. Niimura

- 14:00 B. Schoenborn, *Protein Crystallography with Spallation Neutrons*
 14:30 A. Podjarny, *The Structure of Aldose Reductase at 0.66 Å Resolution shows the H-Atoms Relevant for Inhibitor Binding and the Catalytic Mechanism*
 15:00 C. Bon, *A Combined Neutron Crystallography/IQNS Study of Water around Lysozyme*
 15:30 Coffee Break
 16:00 A. Ostermann, *Hydrogen in Proteins: Recent Results from the Single Crystal Neutron Diffractometer BIX-3*
 16:20 T. Forsyth, *Biological Applications of Monochromatic Neutron Diffraction*
 16:40 R. Bau, *Thermostability of Rubredoxin Determined by Neutron Diffraction Technique*

Bulk Polymers

N1179

- 14:00 J. Colmenero, *The Gaussian behavior of the alpha-relaxation in glass-forming polymers revisited. MD-simulations & QENS results*
 14:30 B. Frick, *On the pressure, temperature and molecular weight dependence of the local polymer dynamics in the glass and the melt*
 14:45 A. Wischnewski, *Constraints of motion in polymer melts: coherent and incoherent scattering analyzed by neutron-spin-echo spectroscopy*
 15:00 S. Koizumi, *Frozen Concentration Fluctuations of a Poly(N-isopropyl acrylamide) Gel Decomposed by Neutron Spin Echo and Small-angle Neutron Scattering*
 15:15 D. Schwahn, *Phase Behavior of Binary Polybutadiene Copolymer Mixtures as an Example of Weakly Interacting Polymers*

Poster Session A

- 17:00 – 19:00 Neutron Instrumentation I (A1 – A62)
 Soft Condensed Matter I (A63 – A82)
 Magnetism I (A83 – A134)
 Material Science I (A135 – A195)
 Biology I (A196 – A209)
 Industrial Applications (A210 – A239)
MS: Magnetic Thin Films and Multilayers (A240 – A269)
MS: Neutrons and High-Energy X-Rays in Material Science (A270 – A282)
MS: Hydrogen Atoms in Biological Function (A283 – A287)

Tuesday September 11, 2001

Magnetic Structures and Dynamics I

Audimax

- 11:00 W. Bao, *Magnetic correlations in heavy fermion CeMIn₅ (M=Rh, Ir and Co)*
 11:30 T. Herrmannsdörfer, *Pressure and temperature dependence of the ordered magnetic U moment of USe*
 11:45 K. Prokes, *Pressure-induced magnetic structures in UNiGa*
 12:00 V. Lazukov, *New dispersive magnetic mode in neutron spectra of unstable valence Sm_{1-x}Y_xS*
 12:15 J. Stewart, *Spin-fluctuations and the spin-liquid to spin-glass transition in β -MnAl*

Methods and Instrumentation II

N1190

- 11:00 B. Schillinger, *The design and simulation of a curved-guide plus flight tube setup for neutron radiography and tomography at the new research reactor FRM-II at the Technical University Munich*
 11:30 H. Shimizu, *Development of Neutron Optical Devices*
 12:00 T. Keller, *The NRSE-TAS Spectrometer at the FRM-II*
 12:15 Y. Nikitenko, *Neutron wave resonator as a spin-echo spectrometer element*

Hydrogen in Materials

N1189

- 11:00 A. Skripov, *Quasielastic neutron scattering studies of H motion in Laves-phase compounds*
 11:30 G. Reiter, *Measurement of the Momentum Distribution in Hydrogen Bonded Systems*
 11:50 R. Lechner, *Proton Conduction Based on Intracrystalline Chemical Reaction*
 12:10 B. Hauback, *Studies of new metal hydrides*

Molecules under Restraint

N1179

- 11:00 M. Bienfait, *Diffraction study of CD₄ and D₂ adsorbed carbon nanotubes*
 11:30 C. Gutt, *Structure and Dynamics of gas hydrates*
 11:50 G. Kearley, *The isomorphous transition between Co(NH₃)₆(PF₆)₂ and Ni(NH₃)₆(PF₆)₂*
 12:10 A. Perdigon, *Solid Monolayers of Simple Alkyl Molecules Adsorbed from their Liquid to Graphite*

Mini Symposium: Spin, Charge and Orbital Degrees of Freedom in Perovskites and Related Compounds

Audimax, Conveners: H. Yoshizawa, A. Loidl

- 14:00 D. Khomskii, *Superstructures in Manganites and other Doped Oxides*
 14:25 R. Kajimoto, *Charge and Stripe order in La_{2-x}Sr_xNiO₄*
 14:50 J. Mitchell, *Heavily Doped Bilayer Manganites: Links among Structure, Charge and Spin*
 15:15 B. Keimer, *Orbital and Spin Dynamics in Titanates and Vanadates*
 15:40 Coffee Break
 16:10 E. Dagotto, *Theory of Colossal Magnetoresistant Materials*
 16:35 P. Dai, *Resistivity Rise and Short-Range Charge Ordering in CMR Manganites*

Mini Symposium: Optimization of Neutron Devices by Simulation

N1190, Conveners: K. Lefmann, G. Eckold

- 14:00 R. McGreevy, *The Tertiary Spectrometer, the Role of Software in Design and Performance of Instruments and Experiments*
 14:30 P. Seeger, *A Model Instrument for Monte Carlo Code Comparisons*
 15:00 A. Wildes, *A Comparison of Monte Carlo Simulations using RESTRAX and McStas with Experiments on IN-14: the Effects on using a Focusing Guide*
 15:15 S. Roth, *Measurement and Simulation of the Inelastic Resolution Function of a Time-of-Flight Spectrometer*
 15:30 Coffee break
 16:00 K. Littrell, *Design of a TOF-SANS Instrument for the Proposed Long Wavelength Target Station at the Spallation Neutron Source*
 16:15 A. Parizzi, *Simulations of the Neutron Spin Precession inside a TOF Spin Resonance Energy Filter*
 16:30 P. Astrand, *New features in McStas, Version 1.5*
 16:45 M. Hagen, *Algorithms for the Simulation of Inelastic Neutron Scattering Experiments*

Mini Symposium: Industrial Applications of Neutron Scattering

N1189, Conveners: S. Spooner, I. Swainson

- 14:00 W. Schmahl, *Use of the Rietveld Refinement with the Generalized Spherical-Harmonic Model of describing Crystallographic Texture in Polycrystalline NiTi Shape Memory Alloys with Neutron Powder Diffraction Data*
 14:20 F. Fiori, *Characterization of Creep Cavitation Damage in a Pressure Vessel Stainless Steel using Small Angle Neutron Scattering*
 14:40 R. Coppola, *High-temperature Stress Evolution in Braze Sample for Plasma-Facing Components in Fusion Reactors*
 15:00 R. Rogge, *Neutron Diffraction Measurement of the Evolution of Strain for Non-Uniform Plastic Deformation*
 15:20 Coffee Break
 16:00 J. Matejicek, *Residual Stress in Sprayed Ni+5%Al Coatings Determined by Neutron Diffraction*
 16:20 R. Rosa, *A Tomography System at Neutron Thermal Column of ENEA Casaccia TRIGA Reactor*
 16:40 Y. Choi, *Measurement of Very Small Hydrogen Content in Materials by Measuring the Incoherent Neutron Scattering*

Biological Systems I

N1179

- 14:00 P. Baglioni, *Living polynucleotides formed by the spontaneous aggregation of dilauroylphosphonucleosides.*
 14:30 I. Köper, *Hindered protein dynamics in the presence of a cryoprotecting agent*
 14:45 M. Müller, *Supercooled water in plant cell walls – Structure and dynamics of water adsorbed to cellulose*
 15:00 J. Fitter, *The Role of Picosecond Fluctuations for Activity and Stability in Proteins*
 15:15 G. Klose, *Determination of Structural Parameters and Hydration of Unilamellar Vesicles by Neutron Scattering Using a Novel Method*

Biological Systems II

N1179

- 16:00 J. White, *Structure and Reactions of Proteins at Interfaces*
16:30 R. Willumeit, *The Interaction of the synthetic Peptide NK2 with Modell Membranes*
16:45 D. Schwendel, *Interaction of Water with Protein Resistant Self-Assembling Monolayers: Neutron Reflectivity Measurements of Water Density in the Interphase Region*

Poster Session B

- 17:00 – 19:00 Neutron Instrumentation II (B1 – B47)
Soft Condensed Matter II (B48 – B83)
Magnetism II (B84 – B145)
Material Science II (B146 – B185)
Biology II (B186 – B199)
Chemistry I (B200 – B214)
MS: Spin, Charge and Orbital Degrees of Freedom in Perovskites and Related Compounds (B215 – B246)
MS: Optimization of Neutron Devices by Simulation (B247 – B270)
MS: Industrial Applications of Neutron Scattering (B271 – B287)

Thursday September 13, 2001

Mini Symposium: Charge, Lattice and Isotope Effects in High-Tc Superconductors

Audimax, Conveners: A. Furrer, Y. Endoh, H. Mook

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| 09:00 | K. Müller, <i>Results and Relations in Cuprate Superconductors</i> |
| 09:45 | T. Egami, <i>Lattice and Charge Effects in High-Tc Superconductors</i> |
| 10:15 | L. Pintschovius, <i>Search for Charge Fluctuation Effects in the Phonons of $YBa_2Cu_3O_x$</i> |
| 10:30 | Coffee Break |
| 11:00 | K. Yamada, <i>Spin Fluctuations in High-Tc Cuprates; Cross Over from Static Charge Stripes to Dynamical Spin Density Waves</i> |
| 11:30 | D. Temprano, <i>Isotope Effects on the Pseudogap in High-Tc Superconductors studied by Inelastic Neutron Scattering</i> |
| 12:00 | R. Gilardi, <i>Doping Dependence of the Tetragonal-Orthorombic Phase Transition in the Superconducting $La_{2-x}Sr_xCuO_4$ Compound</i> |
| 12:15 | T. Yildirim, <i>Anharmonic Lattice Dynamics and Nonlinear Electron-Phonon Coupling in New 40K Superconductor MgB_2</i> |

Mini Symposium: Instrumentation at Advanced Pulsed Sources

N1190, Conveners: K. Crawford, F. Mezei

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|-------|---|
| 09:00 | P. Radaelli, <i>Powder Diffraction at Advanced Pulsed Neutron Sources: Past, Present and Future</i> |
| 09:40 | M. Katagiri, <i>High Position Resolution Scintillation Neutron Imaging Detector by Crossed-Fiber Readout with Novel Centroid Finding Method</i> |
| 10:00 | C. Schulz, <i>A Novel Large-Area, Low-Pressure Detector with High Position and Time-of-Flight Resolution for Thermal Neutron Imaging</i> |
| 10:20 | A. Parizzi, <i>Possibilities for Novel Polarized Pulsed Neutron Instrumentation Based on the TOF Spin Resonance Energy Filter</i> |
| 10:40 | Coffee Break |
| 11:10 | F. Mezei, <i>New Multiplexing Concepts to Enhance the Efficiency of Use of Pulsed Sources</i> |
| 11:30 | J. Ankner, <i>Anticipated Performance of the SNS Liquids Reflectometer</i> |
| 11:50 | J. Santisteban, <i>Comparision of Bragg-Edge Neutron Spectroscopy at ISIS and LANSCE</i> |
| 12:10 | General Discussion Time |

Frustrated Magnets

N1189

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| 09:00 | S. Bramwell, <i>Degeneracy Breaking In The Frustrated Pyrochlore Antiferromagnet</i> |
| 09:15 | S.-H. Lee, <i>Magnetic correlations in the Néel and spin liquid phase of a geometrically frustrated magnet $ZnCr_2O_4$</i> |
| 09:30 | M. Matsuura, <i>Direct evidence of spin frustration in fcc antiferromagnet NiS_2</i> |
| 09:45 | A. Mellergård, <i>Non-classical spin configurations in a kagome based frustrated antiferromagnet: analysis of dynamic disorder by the Reverse Monte-Carlo method</i> |
| 10:00 | C. Pappas, <i>Dynamic scaling in spin glasses : NSE results and theory</i> |
| 10:15 | G. Ehlers, <i>Dynamics of frustrated magnetic moments in $TbNiAl$</i> |

Polymer Solutions

N1179

- 09:00 L. Magid, *Structure and dynamics of giant wormlike micelles and their reversion to globular micelles at high salt concentrations*
- 09:30 L. Noirez, *Non-equilibrium studies of polymers under flow*
- 09:45 J. Zipfel, *Time-resolved SANS investigation of a shear induced lamellar-to-vesicle transition*
- 10:00 J. Stellbrink, *Partial structure factors in star polymer/colloid mixtures*
- 10:15 F. Lo Celso, *Investigating Self-Assembly and Metal Nanocluster Formation in Aqueous Di-Block Copolymers Solutions*

Organic Molecules

N1189

- 11:00 I. Natkaniec, *Neutron spectroscopy and QC modeling low frequency internal vibrations m-xylene molecules with deuterated subunits*
- 11:30 R. Dimeo, *The effects of confinement on rotational tunneling*
- 11:50 O. Kirstein, *Lattice dynamics and methyl group rotation of dimethylacetylene (DMA)*
- 12:10 B. Toudic, *Symmetry breaking, pretansitional phenomena and molecular disorder in an aperiodic molecular composite crystal (to be confirmed)*

Interfaces and Confined Systems

N1179

- 11:00 Y. Matsushita, *Interfacial Characteristics of Block Copolymers with Various Architectures Studied by Neutron Reflectometry*
- 11:30 T. Ederth, *Neutron reflection from foam films*
- 11:45 R. Steitz, *Temperature Induced Changes in Polyelectrolyte Films at the Solid-Liquid Interface*
- 12:00 V. Lauter-Pasyuk, *Interface and Surface Formation in Self-Assembled Polymer Multilayers by Off-Specular Neutron Scattering*
- 12:15 P. Müller-Buschbaum, *Phase separation of weakly incompatible polymer blends confined into isolated droplets*

Magnetic Structures and Dynamics II

Audimax

- 13:30 V. Plakhty, *Polarised neutrons and chiral criticality*
- 14:00 S. Choi, *Spontaneous Weak-Ferromagnetism in the Superconductor $ErNi_2B_2C$*
- 14:15 A. Señas, *Inducing antiferromagnetism with pressure in $TbPt$ and $TbPt_{0.6}Cu_{0.4}$: a neutron diffraction study*
- 14:30 A. Schreyer, *Observation of Spinwaves in a Magnetic Superlattice by Inelastic Neutron Scattering*
- 14:45 T. Chatterji, *Low energy nuclear spin excitations in Nd and $NdCu_2$*

Unusual Material States

N1190

- 13:30 E. Weidner, *Neutron diffuse scattering study of disordered quasicrystal Al₇₂Ni₁₂Co₁₆ up to 1000°C*
 14:00 K. Inoue, *Martensitic and Magnetic Transformations of Ni₂MnGa-based Shape Memory Alloys*
 14:20 S. Vakhrushev, *Lattice Dynamic of PbMg_{1/3}Nb_{2/3}O₃ Relaxor Ferroelectric*
 14:40 S. Chaplot, *Origin of negative thermal expansion in cubic ZrW₂O₈*

Glasses and Liquids

N1189

- 13:30 W.-C. Pilgrim, *Non-Brownian Diffusion in a simple Liquid*
 14:00 C. Alba-Simionescu, *Dynamical properties of the molecular glassforming Toluene : a complementary study by inelastic neutron scattering and realistic Molecular Dynamics simulations.*
 14:20 L. Puszta, *On the structure of red amorphous phosphorus*
 14:40 L. Cormier, *Structure of lithium borate glass and melt using neutron diffraction with isotopic substitution*

Poster Session C

- 15:00 – 17:30 Advanced Neutron Sources (C1 – C15)
 Neutron Instrumentation III (C16 – C54)
 Soft Condensed Matter III (C55 – C90)
 Magnetism III (C91 – C159)
 Material Science III (C160 – C207)
 Chemistry II (C208 – C240)
 MS: Charge, Lattice and Isotope Effects in High-Tc Superconductors (C241 – C246)
 MS: Instrumentation at Advanced Pulsed Neutron Sources (C247 – 253)
 Late submissions: (C254-)

