

ACCESS PROGRAMME

Science Highlights presented in the 4th NMI3 General Meeting at Taormina
11th October 2006-10-31

ISIS Neutrons

More Ice !

(Christoph Salzmann et al, University of Innsbruck, Austria)

Published in Science, March 2006

Bronze Age Manufacturing Techniques

(Rosella Arletti, Laura Cartechini, Sonia Giovannini, Romana Rinaldi

Universities of Modena & Perugia)

GKSS - Geesthacht Neutron Facility (GeNF)

SANS on SANS on CombComb Polyelectrolytes

Texture Analysis on Geological Samples Texture Analysis on Geological Samples

(F. Cifelli¹, M. Mattei¹, M. Chadima², A.M. Hirt³, H.-G. Brokmeier⁴, S. Lenser⁴

1 Università Roma Tre, Roma; 2 Institute of Geology, Prague; 3 Eth, Zürich; 4 Tu Clausthal, Clausthal)

Reactor Institute Delft

No highlights.

FRJ-2

Dynamics in polymer blends

(A.-C. Genix et al., University of the Basque Country, San Sebastián, Spain)

Mixed Micelles as Tumor Markers

(G. Mangiapia et al., University of Naples, Italy)

SpS

μ SR on Current driven Vortices in Type-II Superconductors

(Phys. Rev. B 73, 104514 (2006))

Magnetic Order in quasi-1-d Spin-1/2 Molecular Chain CuPzN

Budapest Neutron Centre

Model membranes

Neutron diffraction structure study of borosilicate based matrix glasses

PGAA1 and TOF-ND2 of English brass plate 'The Civilian', c.1400 AD

TOF powder diffraction from archeological bronze objects

LLB

Charge Charge ordering in Y in $Y_{1-x}Ca_xTiO_3$, $x \sim 0.35$

(A. C. Komarek [PhD], H. Roth, M. Braden / II. Phys. Inst., Univ. Köln

LLB_8046, B)

SANS studies of self-organized solutions of a diblock copolymer A-B in a mixture of two partially miscible solvents

(P. Stepanek / Praha University, Czech Republic LLB_7632, A)

Small-angle neutron scattering at LLB on PAXY

(P. Stepanek / Praha University, Czech Republic)

FRM II

No highlights

ISIS Pulsed Muon Facility

Muons reveal a cascade of magnetic phase transitions in Na_xCoO_2
(*Universite Paris-Sud, France*)

Dynamics about the glass transition
(*University of the Basque Country, Spain*)

Hydrogen behaviour in II-VI nanocrystals
(*University of Utrecht, The Netherlands, and University of Coimbra, Portugal*)

Swiss Spallation Neutron Source SINQ

Dimensional Reduction at a QCP
(*C. Rüegg et al, London Centre for Nanotechnology*)

Inelastic Neutron Scattering on $\text{BaCuSi}_2\text{O}_6$ TASP and RITA-II (SINQ)
(*Ch. Rüegg, D.F. McMorrow, B. Normand, H.M. Ronnow, S.E. Sebastian, I.R. Fisher, C.D. Batista, S. Gvasaliya, Ch. Niedermayer, and J. Stahn*)
Submitted to Phys. Rev. Lett

Neutron Physics Laboratory, R_ez_ near Prague, CZ

Investigation of the internal Th and U radiation dose rate of quartz grains in the quartz coarse-grain protocol of luminescence dating.
(*NPL_1016: F. De Corte (Gent University), local contact J. Kuc_er*)

Characterizing nanoporous material from Ni-base superalloy CMSX4
(*NPL_1007: R. Gilles (TU Muenchen), D. Mukherji (TU Braunschweig), local contact P. Strunz*)

Berlin Neutron Scattering Center HMI Hahn-Meitner-Institut

Magnetic-field induced antiferromagnetism in a cuprate high- T_c superconductor
(*B. Lake, K. Lefmann, N. B. Christensen, G. Aeppli, D. F. McMorrow, H. M. Ronnow, P. Vorderwisch, P. Smeibidl, N. Mangkorntong, T. Sasagawa, M. Nohara, H. Takagi Nature Materials 4, 658 (2005)*)

Experiments with 6T horizontal magnet on V2 at BENSC

First proof of principle of the new method TISANE proposed by Gähler and Golub to extend the time domain accessible by neutron scattering experiments to the 10₋₉ – 10 ms range on the TOF spectrometer NEAT by a HMI - ILL team
(*A. Wiedenmann, U. Keiderling, K. Habicht, M. Russina, and R. Gähler, PRL 97, 057202 (2006)*)