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SNS

Control Room	576-1503
RCT Support (radiation control technician)	274-8658
User Support	241-4432
User Office	574-4600

HFIR

Control Room	574-7035
RCT Support (radiation control technician)	574-6713
User Office	574-4523

SNS Café, Bldg 8600

Breakfast hours: M–F, 7:00 am – 9:30 am

Lunch hours: M–F, 10:45 am – 1:15 pm

HFIR Canteen, Bldg 7910

Lunch hours: M–F, 10:45 am – 1:15 pm

 For questions or comments email us:
neutronscience@ornl.gov

Research Spotlight

Studying residual stresses and austenite phases in Ni-Cr weld joints at VULCAN

Preventing hydrogen-induced cold cracking in welded joints is essential to ensure the reliability of structures built from high-strength steel. A Ni-Cr weld material has been developed that increases resistance to cold cracking; however, the effects of constraint conditions on residual stresses in the weld joints need to be understood to enable practical use of the material. The VULCAN instrument at SNS was used to clarify residual stress conditions and retained austenite phases in the weld material, and the effects of plastic constraint. The intense pulsed neutron flux of SNS and the time-of-flight method and high resolution offered by VULCAN allowed the experimenters to obtain reliable data from sample weld joints in a short time. Hitoshi Sueyoshi and Nobuyuki Ishikawa of JFE Steel Corporation are collaborating. (This is one of several experiments originally scheduled at Japan's J-PARC neutron source that have been accepted at SNS or HFIR while J-PARC is under repair from damage sustained in the March earthquake.)

This Week's Users

SNS, NOMAD (BL1)

Lii-Cherng Leu (Boise State Univ)

SNS, MAGICS (BL-4A)

 Nian Ji (Univ of Minnesota)
 Valeria Lauter (ORNL NScD)

SNS, Liquids Reflectometer (BL4B)

 Marcel Said (Georgia Inst of Technology)
 Gurpreet Singh (Georgia Inst of Technology)
 Abul Huq (Georgia Inst of Technology)
 Nabankur Deb (Georgia Inst of Technology)

SNS, CNCS (BL-5)

Sungdae Ji (Boise State Univ)

SNS, EQ-SANS (BL6)

 Lionel Porcar (ILL)
 Andrea Hamill (NIST)
 Paul Butler (NIST)
 Michael Hickner (Penn State Univ)
 Melanie Disabb-Miller (Penn State Univ)
 Lilin He (ORNL NScD)

SNS, POWGEN (BL-11A)

 James Cline (NIST)
 Seong Su Lee (Korea Atomic Energy Res Inst)
 Shouhang Bo (Stony Brook Univ)
 Diane Colabello (Stony Brook Univ)
 Bingfei Cao (Stony Brook Univ)

SNS, TOPAZ (BL12)

 Julian Chen
 Paul Langan (ORNL NScD)

SNS, ARCS (BL18)

 Judy Pang (ORNL PSD)
 G. Ice (ORNL PSD)
 Douglas Abernathy (ORNL NScD)
 Matthew Stone (ORNL NScD)
 Matthew Lucas (ORNL NScD)

HFIR, GP-SANS (CG-2)

 Mark Dadmun (Univ of Tenn)
 Cameron Lee (Univ of Tenn)
 Wen Yin (Univ of Tenn)
 Ken Littrell (ORNL NScD)
 Lee Robertson (ORNL NScD)
 Mikhail Sokolov (ORNL PSD)

HFIR, Bio-SANS (CG-3)

 Hugh O'Neill (ORNL NScD)
 Volker Urban (ORNL NScD)

HFIR, TAS (HB-1A)

 Songxue Chi (ORISE)
 Feng Ye (ORNL NScD)
 Jaime Fernandez-Baca (ORNL NScD)

HFIR, Powder Diffractometer (HB-2A)

Seongsu Lee (Korea Atomic Energy Res Inst)

HFIR, TAS (HB-3)

 Hiroshi Amitsuka (Hokkaido Univ)
 Chihiro Tabata (Hokkaido Univ)

HFIR, Four Circle Diffractometer (HB-3A)

Matthew Funk (Western Michigan Univ)

Local Happening

8/23/2011 Seminar

Physics at the High Energy Frontier with Colliding Beams of Muons, Dr. Kirk T. McDonald, Professor of Physics Princeton University, Building 8600, Conference Room C-152, 10:00-11:00 a.m.

8/24/2011 Seminar

Fluid Interface Reactions, Structures and Transport Center, and Energy Frontier Research Center, Dave Wesolowski, Chemical Sciences Division, ORNL Materials and Chemistry Seminar Series 10:00 AM -11:00 AM, Building 4500-N, Weinberg Auditorium

8/24/2011 Seminar

Functionalizing and Characterizing Carbon Nanotube Surfaces, Charles Chusuei, Middle Tennessee State University, Murfreesboro, TN, Materials Science and Technology Division Seminar, 2:00-3:00 PM, Building 4500S, Room A-177

8/26/2011 Seminar

Spin Excitation in Ferromagnetic Insulat, Jiang Xiao of Fudan University, Building 4100, Room J-302, 11:00 a.m.-12:00 noon