

National School on Neutron and X-ray Scattering
September 24 - October 11, 2008

Building 223 Auditorium, Room B002
Argonne National Laboratory
Argonne, Illinois

Wednesday, September 24

3:00 p.m. until 8:00 p.m. - An informal get-together is scheduled in the Lodging Facility/Exchange Club located in the lower level of Building 617. Food and beverages will be provided. All School participants and program presenters are invited to attend.

Program Week 1 (September 24-27) - Argonne National Laboratory (as of 9/18/08)

Time/Date	Thursday September 25	Time/Date	Thursday September 25	Time/Date	Friday September 26	Saturday September 27
8:00 - 9:00	Registration and Continental Breakfast (Foyer of Building 223 Auditorium)	9:15 - 10:15	Lecture Interaction of X-rays and Neutrons with Matter D. F. McMorrow University College London (1)	8:30 - 9:30	Lecture Interaction of X-rays and Neutrons with Matter D. F. McMorrow University College London (1)	Bus travel to Oak Ridge
9:00 - 9:15	Opening Remarks Alfred P. Sattelberger Associate Laboratory Director Energy Science and Engineering Argonne National Laboratory Welcome Harold W. Myron Director Division of Educational Programs Argonne National Laboratory Suzanne G. E. te Velthuis Physicist Materials Science Division Argonne National Laboratory Jonathan C. Lang Physicist X-ray Science Division Advanced Photon Source Argonne National Laboratory Bryan C. Chakoumakos Geoscientist High Flux Isotope Reactor (HFIR) Neutron Scattering Science Division Oak Ridge Laboratory	10:15 - 10:30	Break	9:30 - 9:45	Break	
		10:30 - 11:30	Lecture Continued Interaction of X-rays and Neutrons with Matter	9:45 - 10:45	Lecture Continued Interaction of X-rays and Neutrons with Matter	
				10:45 - 11:00	Break	
		11:30 - 12:00	Group Photo	11:00 - 12:00	Lecture Neutron Generation/Detection J. M. Carpenter Argonne National Laboratory (3)	
		12:00 - 1:15	Lunch			
		1:15 - 2:15	Lecture X-ray Generation/Instrumentation D. M. Mills Argonne National Laboratory (2)	12:00 - 1:15	Lunch	
				1:15 - 2:15	Lecture Continued Neutron Generation/Detection	
		2:15 - 2:30	Break	2:15 - 2:30	Break	
		2:30 - 3:30	Lecture Continued X-ray Generation/Instrumentation	2:30 - 3:30	Lecture Real/Reciprocal Space Complementarity J. M. Gibson Argonne National Laboratory (4)	
3:30 - 5:30	Advanced Photon Source Tour and Safety Training	3:45 - 4:45	Lecture Continued Real/Reciprocal Space Complementarity	Dinner on arrival		

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Building 8600, Main Lobby
Oak Ridge National Laboratory
Oak Ridge, Tennessee

Program Week 2 - Oak Ridge National Laboratory

Sunday September 28	Time/Date	Monday September 29	Tuesday September 30	Wednesday October 1	Thursday October 2	Friday October 3	Saturday October 4
<p>8:30-12:00 Badging, Safety Training, Orientation</p> <p>12:00-12:45 Continuing Discussion</p> <p>12:45-1:00 Welcome</p> <p>Thom Mason, Director Oak Ridge National Laboratory</p> <p>Dean Myles, Director Neutron Scattering Science Division Oak Ridge National Laboratory</p> <p>1:00-1:45 Lecture</p> <p>Neutron Instrumentation/ Optics D. Myles Oak Ridge National Laboratory (5)</p> <p>1:45-2:00 Break</p> <p>2:00-2:45 Lecture Continued</p> <p>Neutron Instrumentation/ Optics</p> <p>3:00-6:30 Tours</p> <p>SNS HFIR Graphite Reactor</p> <p>6:30-8:00 Dinner and Discussion</p>	8:30 - 9:30	<p>Lecture</p> <p>Powder Diffraction J. J. Rhyne Los Alamos National Laboratory</p> <p>(6)</p>	<p>Lecture</p> <p>Inelastic Neutron Scattering R. Osborn Argonne National Laboratory</p> <p>(8)</p>	<p>Lecture</p> <p>Magnetic Scattering C. F. Majkrzak National Institute of Standards and Technology</p> <p>(10)</p>	<p>Lecture</p> <p>Diffuse Scattering G. E. Ice Oak Ridge National Laboratory</p> <p>(12)</p>	<p>Bus travel to Argonne</p>	<p>Free day in Chicago</p>
	9:30 - 9:45	Break	Break	Break	Break		
	9:45 - 10:45	<p>Lecture Continued</p> <p>Powder Diffraction</p>	<p>Lecture Continued</p> <p>Inelastic Neutron Scattering</p>	<p>Lecture Continued</p> <p>Magnetic Scattering</p>	<p>Lecture</p> <p>Micro-Diffraction G. E. Ice Oak Ridge National Laboratory</p> <p>(13)</p>		
	10:45 - 11:00	Break	Break	Break	Break		
	11:00 - 12:00	<p>Lecture</p> <p>Quasi-elastic Neutron Scattering K. W. Herwig Oak Ridge National Laboratory</p> <p>(7)</p>	<p>Lecture</p> <p>Reflectivity C. F. Majkrzak National Institute of Standards and Technology</p> <p>(9)</p>	<p>Lecture</p> <p>Single Crystal Diffraction X. Wang Oak Ridge National Laboratory</p> <p>(11)</p>	<p>Lecture</p> <p>Powder Diffraction Applications A. Huq Oak Ridge National Laboratory</p> <p>(14)</p>		
	12:00 - 12:45	Break Continuing Discussion	Break Continuing Discussion	Break Continuing Discussion	Break Continuing Discussion		
	12:45 - 1:45	<p>Lecture Continued</p> <p>Quasi-elastic Neutron Scattering</p>	<p>Lecture Continued</p> <p>Reflectivity</p>	<p>Lecture Continued</p> <p>Single Crystal Diffraction</p>	<p>Lecture</p> <p>PDF Analysis T. E. Proffen Los Alamos National Laboratory</p> <p>(15)</p>		
	1:45 - 2:00	Move to HFIR and SNS	Move to HFIR and SNS	Move to HFIR and SNS	Break		
	2:00 - 6:30	See "Experiments Schedule"	See "Experiments Schedule"	See "Experiments Schedule"	Experiments Discussion		
	6:30 - 8:00	Dinner and Discussion	Dinner and Discussion	Dinner and Discussion	Dinner and Discussion		

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Program Week 3 - Argonne National Laboratory

Time/Date	Sunday October 5	Monday October 6	Tuesday October 7	Wednesday October 8	Thursday October 9	Friday October 10	Saturday October 11
8:30 - 9:30	Free Time	Lecture Small Angle Scattering S. Krueger National Institute of Standards and Technology (17)	Lecture X-ray Absorption Fine Structure (XAFS) G. B. Bunker Illinois Institute of Technology (20)	Lecture Magnetic Spectroscopy and Scattering E. Fullerton University of California, San Diego (25)	Lecture Spin-Echo Techniques R. Pynn Indiana University, Bloomington (27)	Lecture Time-Resolved X-ray Scattering D. A. Reis University of Michigan, Ann Arbor (28)	School participants depart for home
9:30 - 9:45		Break	Break	Break	Break	Break	
9:45 - 10:45	Lecture X-ray Detection/ Sources S. M. Gruner Cornell University (16)	Lecture Continued Small Angle Scattering	Lecture Continued X-ray Absorption Fine Structure (XAFS)	Lecture Continued Magnetic Spectroscopy and Scattering	Lecture Continued Spin-Echo Techniques	Lecture Proposal Writing Strategies (29)	
10:45 - 11:00	Break	Break	Break	Break	Break	Break	
11:00 - 12:00	Lecture Continued X-ray Detection/ Sources	Lecture High-Pressure Techniques W. Mao Stanford University (18)	Lecture Coherent X-ray Scattering L. B. Lurio Northern Illinois University (21)	Lecture X-ray Imaging S. R. Stock Northwestern University (26)	11:00 - 11:30 Free Time 11:30 - 12:30 Early Lunch 12:30 - 5:30 p.m. See "Experiments Schedule"	Preparation of Reports	
12:00 - 1:15	Lunch	Lunch	Lunch	Lunch		Lunch	
1:15 - 2:15	1:30-6:30 See "Experiments Schedule"	Lecture Neutron and X-rays for Nanoscience E. D. Isaacs Argonne National Laboratory (19)	Lecture Inelastic X-ray Scattering P. M. Abbamonte University of Illinois at Urbana-Champaign (22)	Lecture continued X-ray Imaging	Reception/Banquet Argonne Guest House Building 460 6:00 p.m. - Reception 6:30 p.m. - Dinner	1:00-5:30 Student Presentations	
2:15 - 2:30		Break	Break	Break			
2:30 - 9:30		See "Experiments Schedule"	Lecture Neutron Sources J. J. Rhyne Los Alamos National Laboratory (23) Lecture Synchrotron Sources P. Zschack Argonne National Laboratory (24)	See "Experiments Schedule"			
						6:00 School Closing Picnic	