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
8:30-12:00 ***Badging, Safety Training, Orientation*** ***12:00-12:45*** ***Continuing Discussion*** ***12:45-1:00*** ***Welcome*** Thom Mason, Director Oak Ridge National Laboratory Dean Myles, Director Neutron Scattering Science Division Oak Ridge National Laboratory ***1:00-1:45*** ***Lecture*** Neutron Instrumentation/ Optics D. Myles Oak Ridge National Laboratory **(5)** ***1:45-2:00*** ***Break*** ***2:00-2:45*** ***Lecture Continued*** Neutron Instrumentation/ Optics ***3:00-6:30*** ***Tours*** SNS HFIR Graphite Reactor ***6:30-8:00*** ***Dinner and Discussion***	8:30 - 9:30	***Lecture*** Powder Diffraction J. J. Rhyne Los Alamos National Laboratory **(6)**	***Lecture*** Inelastic Neutron Scattering R. Osborn Argonne National Laboratory **(8)**	***Lecture*** Magnetic Scattering C. F. Majkrzak National Institute of Standards and Technology **(10)**	***Lecture*** Diffuse Scattering G. E. Ice Oak Ridge National Laboratory **(12)**	***Bus travel to Argonne***	***Free day in Chicago***
	9:30 - 9:45	Break	Break	Break	Break		
	9:45 - 10:45	***Lecture Continued*** Powder Diffraction	***Lecture Continued*** Inelastic Neutron Scattering	***Lecture Continued*** Magnetic Scattering	***Lecture*** Micro-Diffraction G. E. Ice Oak Ridge National Laboratory **(13)**		
	10:45 - 11:00	Break	Break	Break	Break		
	11:00 - 12:00	***Lecture*** Quasi-elastic Neutron Scattering K. W. Herwig Oak Ridge National Laboratory **(7)**	***Lecture*** Reflectivity C. F. Majkrzak National Institute of Standards and Technology **(9)**	***Lecture*** Single Crystal Diffraction X. Wang Oak Ridge National Laboratory **(11)**	***Lecture*** Powder Diffraction Applications A. Huq Oak Ridge National Laboratory **(14)**		
	12:00 - 12:45	Break Continuing Discussion	Break Continuing Discussion	Break Continuing Discussion	Break Continuing Discussion		
	12:45 - 1:45	***Lecture Continued*** Quasi-elastic Neutron Scattering	***Lecture Continued*** Reflectivity	***Lecture Continued*** Single Crystal Diffraction	***Lecture*** PDF Analysis T. E. Proffen Los Alamos National Laboratory **(15)**		
	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		***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"***	***Reception/Banquet*** ***Argonne Guest House*** ***Building 460*** *6:00 p.m. - Reception* *6:30 p.m. - Dinner*	***6:00*** ***School Closing Picnic***	