

National School on Neutron and X-ray Scattering

May 30 – June 13, 2009

Building 8600

Oak Ridge National Laboratory, Oak Ridge, TN

Program Week 1 – Oak Ridge National Laboratory

Saturday May 30	Time	Sunday May 31	Monday June 1	Tuesday June 2	Wednesday June 3	Thursday June 4	Friday June 5	Saturday June 6
9:30 AM-3:30 PM Arrival at TYS airport & transportation to Oak Ridge hotel  Bus to ORNL from hotel 3:30PM & 4:20PM	8:00-9:00AM	Safety Training						Travel to ANL
	9:00-10:00AM	<b>Lecture 3</b> Interaction of X-rays & Neutrons with Matter Roger Pynn Indiana University	<b>Lecture 7</b> Inelastic Neutron Scattering Rob McQueeney Iowa State University	<b>Lecture 10</b> Magnetic Scattering Bruce Gaulin McMaster University	<b>Lecture 13</b> Reflectivity C. F. Majkrzak National Institute of Standards and Technology	<b>Lecture 16</b> Neutron Generation & Detection J. M. Carpenter Argonne National Laboratory	<b>Lecture 19</b> Diffuse Scattering G. E. Ice Oak Ridge National Laboratory	
4:00-5:00PM Badging at SNS	10:00-10:15AM	Break	Break	Break	Break	Break	Break	
	10:15-11:15AM	<b>Lecture 4</b> Interaction of X-rays & Neutrons with Matter Roger Pynn Indiana University	<b>Lecture 8</b> Powder Diffraction A. Huq Oak Ridge National Laboratory	<b>Lecture 11</b> Small Angle Scattering Volker Urban Oak Ridge National Laboratory	<b>Lecture 14</b> Neutron Polarization C. F. Majkrzak National Institute of Standards and Technology	<b>Lecture 17</b> Single Crystal Diffraction Art Schultz Argonne National Laboratory	<b>Lecture 20</b> Micro-Diffraction G. E. Ice Oak Ridge National Laboratory	
5:00-5:30PM  Welcome Thom Mason, Director ORNL  Dean Myles, Director, NSS Division, ORNL	11:15-11:30AM	Break - Group Photo	Break	Break	Break	Break	Break	
	11:30AM- 12:30PM	<b>Lecture 5</b> Neutron Instrumentation/Optics Dean Myles Oak Ridge National Laboratory	<b>Lecture 9</b> Quasi-elastic Neutron Scattering K. W. Herwig Oak Ridge National Laboratory	<b>Lecture 12</b> Small Angle Scattering Volker Urban Oak Ridge National Laboratory	<b>Lecture 15</b> Powder Diffraction Applications A. Huq Oak Ridge National Laboratory	<b>Lecture 18</b> Small Molecule Crystallography Applications X. Wang Oak Ridge National Laboratory	<b>Lecture 21</b> PDF Analysis Chris Benmore Advanced Photon Source Argonne National Laboratory	
5:30-6:30PM Dinner	12:30-1:15PM	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	
6:30-7:30PM <b>Lecture 1</b> Interaction of X-rays & Neutrons with Matter Roger Pynn Indiana University	1:15-2:15PM	<b>Lecture 6</b> Inelastic Neutron Scattering Rob McQueeney Iowa State University	1:15-1:45PM Move to HFIR & SNS Experiments	1:15-1:45PM Move to HFIR & SNS Experiments	1:15-1:45PM Move to HFIR & SNS Experiments	1:15-2:15PM <b>Experiments Discussion I</b>	1:15-9:00PM  TOUR: ALCOA Aluminum; or Smiths Detection X-ray systems  Dinner & Discussion: RT Lodge @ Maryville College Presentation: Gene Ice  Closeout Session: Science Directors & User Office	
			2:15-2:30PM	break	1:45-7:00PM <b>See "Experiments Schedule"</b>	1:45-7:00PM <b>See "Experiments Schedule"</b>		1:45-7:00PM <b>See "Experiments Schedule"</b>
7:30-8:30PM <b>Lecture 2</b> Interaction of X-rays & Neutrons with Matter Roger Pynn Indiana University	2:30-7:00PM	Graphite Reactor, HFIR & SNS Tours				3:45-4:45PM <b>Experiments Discussion III</b>		
	7:00-8:00PM	Dinner	Dinner	Dinner	Dinner	Dinner		
	8:00-9:00PM		<b>General Lecture</b> Eli Greenbaum "Spinach Science" ORNL	<b>General Lecture</b> Jim Rhyne "Neutron Sources" LANSCE	<b>General Lecture</b> Hap McSween "Mars Explorer Rover Mission" University of Tennessee			

Program Week 2 - Argonne National Laboratory

Sunday June 7	Time/Date	Monday June 8	Tuesday June 9	Wednesday June 10	Thursday June 11	Friday June 12	Saturday June 13
<i>Free Day in Chicago</i>	9:00 - 10:00	<i>Lecture</i> X-ray Generation/ Instrumentation D. M. Mills Argonne National Laboratory	<i>Lecture</i> X-ray Absorption Fine Structure (XAFS) G. B. Bunker Illinois Institute of Technology	<i>Lecture</i> X-ray Imaging C. J. Jacobsen Stony Brook University	<i>Lecture</i> Surface Scattering and Spectroscopy T. Chiang University of Illinois at Urbana-Champaign	<i>Lecture</i> Real/Reciprocal Space Complementarity J. M. Gibson Argonne National Laboratory	<p>9:30 - 12:30 <i>Student Presentations</i></p> <p>12:30 <i>Student Closing Picnic</i></p>
	10:00 -	Break	Break	Break	Break	Break	
	10:15 - 11:15	<i>Lecture Continued</i> X-ray Generation/ Instrumentation	<i>Lecture Continued</i> X-ray Absorption Fine Structure (XAFS)	<i>Lecture Continued</i> X-ray Imaging	<i>Lecture Continued</i> Surface Scattering and Spectroscopy	<i>Lecture Continued</i> Real/Reciprocal Space Complementarity	
	11:15 -	Break	Break	Break	Break	Break	
	11:30 - 12:30	<i>Lecture</i> X-ray Detection P. Denes Lawrence Berkeley National Laboratory	<i>Lecture</i> High Energy X-ray Applications D. R. Haeffner Argonne National Laboratory	<i>Lecture</i> Non-crystalline Diffraction T. Irving Illinois Institute of Technology	<i>Lecture</i> Coherent X-ray Scattering L. B. Lurio Northern Illinois University	<i>Lecture</i> Proposal Writing J. Lang Argonne National Laboratory	
	12:30 - 1:30	Lunch	Lunch	Lunch	Lunch	Lunch	
	1:30 - 2:30	<i>Lecture Continued</i> X-ray Detection	<i>Lecture</i> High Pressure Techniques W. Mao Stanford University	<i>Lecture</i> Time-Resolved Scattering D. Reis Stanford University	<i>Lecture</i> Magnetic Spectroscopy E. Fullerton University of California, San Diego	<p>1:45 - 5:30 <i>Experiment Time D</i> <i>See "Experiments Schedule"</i></p>	
	2:30 - 2:45	Break	Break	Break	Break		
2:45 - 6:45	<i>Experiment Time A</i> <i>See "Experiments Schedule"</i>	<i>User Badging</i>  <i>Optional Tour of APS</i>  <i>Free Time</i>	<i>Experiment Time B</i> <i>See "Experiments Schedule"</i>	<i>Experiment Time C</i> <i>See "Experiments Schedule"</i>			
7:00	<i>Experiment Discussion</i>		<i>Experiment Discussion</i>	<i>Experiment Discussion</i>	<p><i>Reception/Banquet</i> <i>Argonne Guest House</i> <i>Building 460</i> 6:30 p.m. - Reception 7:00 p.m. - Dinner</p>		
							<p><b>Sunday June 14</b> <i>School Participants Depart for Home</i></p>