

Saskatoon Synchrotron Summer School III
August 18 - 22, 2008

SCHEDULE	TITLE	SUMMARY/LOCATION	PRESENTER
MONDAY - THE BASICS			
8:30 - 9:30	Welcome and History of SR	History of synchrotron radiation - LAW 150	Joseph Hormes, Executive Director of CLS (Incoming)
9:30 - 10:30	History of CLS	Orientation to CLS - LAW 150	Jeffrey Cutler, Associate Director of Research for Industrial Science, CLS
10:30 - 10:45	Break		
10:45 - 11:45	Synchrotron 101	The _very basics_ of what a synchrotron is and how it works Synchrotron Radiation and Matter - introducing the basic concepts and vocabulary including both x-ray and infrared interactions. - LAW 150	Tasha Summers, Accelerator Physicist, CLS
11:45 - 1:00	Lunch - Marquis Hall		
1:00 - 2:00	Beamline Basics	How a beamline works: Soft X-ray, Hard X-ray and IR - LAW 150	Tom Regier, Science Associate, CLS-SGM
2:30 - 4:00	Tours	Become familiar with both the machine and the beamlines - photos for access badges will also be taken - CLS (reception)	CLS Staff
6:30 - 9:00	Social Activity	Princess Cruise - a riverboat cruise with supper provided. A very relaxing way to view the city of bridges.	
TUESDAY - TECHNIQUES			
These are intended to build on the basics, introducing participants to each technique that they would be able to access this year at CLS. These will be in LAW 150			
8:30 - 10:00	IR spectroscopy/Imaging	From high resolution spectroscopy to IR microscopy	Luca Quaroni and Brant Billinghamurst, Staff Scientists, CLS-MidIR and FarIR Beamlines
10:00 - 10:15	Break		
10:15 - 11:45	XAS/XRF	Hard X-ray XANES and EXAFS. X-ray Fluorescence	Bruce Ravel, Beamline Scientist, NIST/APS
11:45 - 1:00	Lunch - Marquis Hall		
1:00 - 2:30	NEXAFS	Soft X-ray spectroscopy - electron, fluorescence and optical yields	Robert Blyth, Staff Scientist, CLS-SGM Beamline
2:30 - 2:45	Break		
2:45 - 4:00	Diffraction	The basics of diffraction for beginners	Jesse Smith, Department of Physics, University of Ottawa
Evening	Social Activity	Free time	
WEDNESDAY TECHNIQUES CONT - LAW 150			
8:30 - 9:45	Crystallography	High resolution to high throughput	Stan Moore, Department of Biochemistry, University of Saskatchewan
9:45 - 11:00	Medical Imaging	A brief survey of synchrotron specific biomedical imaging methods with emphasis on K-edge subtraction and diffraction enhanced imaging	Tomasz Wysokinski, Staff Scientist, and Chris Ryan, CLS-BMIT Beamline
11:00 - 11:15	Break		
11:15 - 12:30	Spectromicroscopy	The art of spectroscopy at the micro- and nanoscale	Chithra Karunakaran, Staff Scientist, CLS-SM Beamline
12:30 - 1:30	Lunch - Marquis Hall		
1:30 - 2:45	X-ray Emission and Scattering	Science questions that can be answered with photon-in photon-out spectroscopy	Alex Moewes, Canada Research Chair in Materials Science with Synchrotron Radiation, University of Saskatchewan
2:45 - 4:00	Accessing Beamtime	Overview of the peer review and allocation processes	Robert Blyth, Member CLS Beamtime Allocation Committee
	Group Photo	taken near the sign at the front of the building just before attending the poster session	
4:00 - 6:00	Social Activity	Poster Session	
THURSDAY - PRACTICAL SESSIONS			
These are practical sessions including both 'hands on' and 'case study' activities. There will be small groups in each session to ensure practical experience. We intend for these to be an extension of Tuesday and Wednesday's introductory sessions. All will be taking place at CLS according to their own schedule. Snacks and lunch will be available in the BMIT extension.			
8:30 - 4:30	Soft X-ray & Photo Emission Spectroscopy	SGM Beamline & Boardroom (1028)	Robert Blyth, Staff Scientist, CLS-SGM Beamline
8:30 - 4:30	Diffraction	HXMA Beamline (am) & Meeting Room 2068 (pm)	Jesse Smith, Department of Physics, University of Ottawa
8:30 - 4:30	Spectroscopy & Imaging	Far IR, MidIR & SM Beamlines & Meeting Room 2046	Brant Billinghamurst, Luca Quaroni & Chithra Karunakaran, Staff Scientists, CLS- FarIR, MidIR & SM Beamlines
8:30 - 4:30	XAS	Meeting Room 2068 (am) & HXMA Beamline (pm)	Bruce Ravel, Beamline Scientist, NIST/APS
6:00 - 7:30	Social Activity	Supper at Faculty Club	
FRIDAY - SCIENCE TALKS			

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	This is where the experts get to talk about their cutting edge synchrotron research - building on those sessions that were focussed on in data analysis. These will be in LAW 150. CLS staff is invited to join these sessions.
8:30 - 9:45	<i>"The CLS Far Infrared Beamline"</i> . - A.R. (Bob) McKellar, Research Officer, NRC Steacie Institute for Molecular Sciences
9:45 - 11:00	<i>"Molecular spectroscopy and chemical dynamics in the VUV and soft X-ray"</i> - John Neville, Assistant Dean, School of Graduate Studies; Associate Professor, Department of Chemistry, University of New Brunswick
11:00 - 11:15	Break
11:15 - 12:30	<i>"Soft X-ray Spectroscopy: Principles & Applications"</i> - T.K. Sham, Canada Research Chair in Materials and Synchrotron Radiation, University of Western Ontario