

LIFE SCIENCES MULTI-TECHNIQUES STREAM CLS SUMMER SCHOOL							
Sunday June 13th, 2010							
9:300 - 11:30	Registration Open - CLS Main Reception						
Please check in with us to receive your registration packages prior to your safety orientation and join us for lunch.							
10:15 - 10:45	Beamline safety orientation for crystallography - 10 people						
11:00 - 12:00	Beamline safety orientation for biomedical session Wednesday						
11:00 - 11:30	Beamline safety orientation for crystallography - 10 people						
Those registered for multi-techniques in microprobe and infrared microscopy, your safety orientation is included in your practical session.							
12:00 - 12:30	Lunch! In the upper floor of the BMIT addition.						
GO TO VIDO - EAST, ACROSS THE GRASS - Vaccine & Infectious Disease Organization							
12:45 - 13:00	Welcome to S4V!!	Announcements by event organizers: Tracy Walker, Robert Blyth					
13:00 - 13:45	CLS & synchrotrons - a history?	Josef Hormes, Executive Director, CLS					
13:45 - 14:45	Synchrotron 101	Ward Wurtz, Accelerator Physicist, CLS					
14:45 - 15:00	Nutrition break						
15:00 - 16:00	Beamline Basics	Tom Regier, CLS Staff Scientist - SGM					
16:00 - 17:30	Tours of CLS						
Monday June 14th, 2010 - at VIDO							
8:00 - 9:00	Mid Infrared Spectroscopy Mapping Case Study	Luca Quaroni, Infrared Beamline Scientist, Swiss Light Source					
9:00 - 10:00	MidIR at CLS	Tim May, CLS Staff Scientist, Acting MidIR					
10:00 - 10:15	Nutrition break						
10:15 - 11:15	Biomedical Imaging Case Study	Rob Lewis, Director, Monash Centre for Synchrotron Science, Monash University					
11:15 - 12:15	Biomedical Imaging at CLS	Tomasz Wysokinski, CLS Staff Scientist - BMIT (05B1-1 & 05ID-2)					
12:15 - 13:00	Lunch						
13:00 - 14:00	Microprobe Case Study	Ingrid Pickering, Canada Research Chair in Molecular Environmental Science, University of Saskatchewan					
14:00 - 15:00	Microprobe at CLS	Robert Blyth, Assistant Director of Research, CLS					
15:00 - 15:15	Nutrition break						
15:15 - 16:15	Microprobe Case Study	Joseph Essilfie - Dughan, Postdoctoral Fellow, University of Saskatchewan					
18:00	Cocktails at Western Development Museum	Enjoy dinner and a visit to Boomtown!					
Tuesday June 15th, 2010 - at CLS							
	Biomedical Imaging - BMIT	X-ray techniques - SXRMB & 2046	Mid Infrared - MidIR & 1028				
	Tomasz Wysokinski & Dean Chapman	Robert Blyth & TK Sham	Brant Billinghamurst & Luca Quaroni				
8:00-8:30	Introduction to BMIT	Experimental planning session	Sample preparation/Introduction to Beamline				
8:30 - 9:00							
9:00 - 10:00	Beamline Prep/Alignment	Basic beamline braining	Introduction to OPUS				
10:00 - 10:15	Nutrition Break						
10:15 - 11:15	Sample Prep/Initial scout images	X-ray fluorescence	Collect Map Using FPA				
11:15 - 12:15	Sample imaging	X-ray absorption	Identify Points of interest from FPA MAP				
12:15 - 13:00	Lunch						
13:00 - 14:00	Sample imaging	Good quality data acquisition	Spectra of points of Interest with FPA				
14:00 - 15:00			Spectra of points of Interest with Synchrotron				
15:00 - 15:15	Nutrition Break						
15:15 - 16:15	Image/Data analysis	Data analysis	Data Analysis/Questions				
16:15 - 17:15	Visualization						
16:30 - 17:30	Experiment wrap-up/interpretation						

Wednesday June 16th, 2010 - at CLS							
	Biomedical Imaging - BMIT	Mid Infrared - MidIR & 1028					
	Tomasz Wysokinski & Dean Chapman	Brant Billinghamurst & Luca Quaroni					
8:00-8:30	Introduction to BMIT	Sample preparation/Introduction to Beamline					
8:30 - 9:00							
9:00 - 10:00	Beamline Prep/Alignment	Introduction to OPUS					
10:00 - 10:15	Nutrition Break						
10:15 - 11:15	Sample Prep/Initial scout images	Collect Map Using FPA					
11:15 - 12:15	Sample imaging	Identify Points of Interest from FPA MAP					
12:15 - 13:00	Lunch						
13:00 - 14:00	Sample imaging	Spectra of points of Interest with FPA					
14:00 - 15:00		Spectra of points of Interest with Synchrotron					
15:00 - 15:15	Nutrition Break						
15:15 - 16:15	Image/Data analysis	Data Analysis/Questions					
16:15 - 17:15	Visualization						
16:30 - 17:30	Experiment wrap-up/interpretation						
Thursday June 17th, 2010 - AUM workshops at TCUP downtown							
full day	Diffraction Measurements on Micro and Nano scales using Synchrotrons	Renfei Feng, CLS Staff Scientist - REXIS					
morning	Capabilities, Limitations and Opportunities in Micro-CT Imaging	David Cooper, Assistant Professor, University of Saskatchewan					
split session - early afternoon	Scientist Research Reports: 1. "Advances in Coherent Synchrotron Radiation at CLS" 2. "Mapping gallium in tissues: a possible new treatment for infection" 3. "Wide Range Optical Spectroscopy on SWNTs and Few Layer Graphene" infection	1. Jack Bergstrom, CLS 2. Julie Thompson, Industry Scientist, CLS 3. Ferenc Borondics, Canadian Light Source					
full day	Macromolecular Crystallography	Pawel Grochulski, CLS Staff Scientist, CMCF					
morning	Practicalities in Biological Sample Preparation	Summer School Organization Committee					
afternoon	Biomedical Imaging and Therapy (BMIT) Opportunities	Dean Chapman, University of Saskatchewan					

