

## SCH workshop, Sept. 23-28, 2018, NHMFL@Tallahassee

Day Time	Monday	Tuesday	Wednesday	Thursday	Friday
9am – 12 pm	Welcome and Workshop overview (10') (TC)	@SCH, Hand on Operation, training and measurment	@SCH Hands on operation, training and measurement	@SCH Hands on operation, training and measurement	@SCH Hands on operation, training and measurement
	Introduction to High Field NMR – Bio (30') (TC)				
	Introduction to High Field NMR – Materials (30')(ZG)				
	SCH and Magnet Design (30') (Bird)				
	DC Facility Operation and Safety (30') (T. Murphy/S. Hannah)				
	Field Regulation and Homogeneity (30') (Ilya/Bill)				
	lunch break				
afternoon	MagLab Tour	3pm to 4/4:30pm Lectures Below			Wrap up
	Attendee's Talk (20' each)	NMR Probes	Pulse Sequences	Data Processing	
	Preparation for SCH run	Preparation for SCH run	Preparation for SCH run	Preparation for SCH run	

### Lectures and Scope

Welcome and Workshop Overview → Describe General Goal of the Workshop  
 Introduction to High Field NMR – Bio (TC)

Introduction to High Field NMR – Materials (ZG)

Safety (IH) – SCH use focus (30') → Describe organization of Cell14 and emphasize keys aspects of safely operating SCH

Magnet Design and Operation → A combination of HTS/LTS magnets, SCH design and operation (power supply, cooling water, cryogen, quench protection system)

Field Regulation and Homogeneity → Cascade system, field/frequency lock, passive and active Shimming

Attendees Talk → describe the sample system, NMR experiment, objectives and goal from each user

NMR probes (PG)

Pulse Sequence → Essentials: encode theoretical Pulse sequences into a working sequence; how phase cycling works (examples will depend on scope of attendees work);

Processing → Essentials: TPPI/States, Phase modulated/hypercomplex/echo-antiecho, going through examples of 1D and 2D processing using user written matlab script (examples will depend on scope of attendees work)

Other 'talks' that could happen during Hands on time:

Packing bio-solids samples on 2mm rotor. (JP)

Making PVC cells for the static coil. (JP)