


IF09 - Cross Cutting and System Integration


What had we done?

- LOI parsing and organization
- Tried to capture activities without an IF home
- Surveyed status of facilities
- Held Multi-HEP workshop on multidisciplinary work
<https://indico.physics.lbl.gov/event/1217/>
- Stopped and forgot everything

Summary of MultiHEP
if interested
Uploaded slides here
because they don't
seem to show up
in APS meeting site.

9 Nov 2020		10 Nov 2020		11 Nov 2020	12 Nov 2020	
AM	08:00 Welcome and Introduction (until 08:15) 0	08:00 Panel 1: LAPPD experience - Maurice Garcia-Scoveres Karen Bynum (ANL) (until 10:00) 0	08:00 Panel Discussion - Michael Minot (Incom) Henry Frisch (U. Chicago) Simona Malace (JLAB) Mike Pellin (ANL/Chicago) Amanda Weinstein (Iowa State U.) Bob Wagner (ANL) Howard Nicholson (Mt. Holyoke Coll.) Jim Buckley (Washington U. St. Louis) 0	08:00 -- Veteran's Day Holiday --	08:00 HEP-Industry partnership talks - Ian Shipsey (Oxford U.) (until 10:10) 0	08:00 Fully depleted scientific CCDs - Stephen Holland 0
	08:15 Bio/MS/Chem showcase presentations - Petra Merket (Fermilab) (until 10:15) 0	10:00 --- Break ---	10:30 Panel 2: Low background copper and related technologies - Jim Fast Jeter Hall (SNOLab) (until 12:30) 0		08:30 Superconducting fab for CMB - Aritoki Suzuki 0	08:50 Low-gain Avalanche Detectors (LGAD) for combined temporal and spatial precision - Hartmut Sadrozinski (UCSC) 0
	08:15 Chemistry for barium tagging - Ben Jones (UTA) 0	10:30 Panel Discussion - Cabot Ann Christofferson (S. Dakota School of Mines and Tech.) Frank Avignone (U. of South Carolina) Eric Hoppe (PNNL) Susana Cebrian (Universidad de Zaragoza) 0			09:10 National and DOE SBIR Overview & DOE Office of Science SBIRs for Detectors for HEP and Accelerators - Ken Marken (DOE HEP Accelerator R&D) 0	09:10 National and DOE SBIR Overview & DOE Office of Science SBIRs for Detectors for HEP and Accelerators - Ken Marken (DOE HEP Accelerator R&D) 0
	08:45 Novel room temperature photon detectors using carbon nanotubes - Francois Leonard (Sandia NL) 0				09:40 DOE Office of Science SBIRs for Nuclear Physics - Michelle Shinn (DOE NP Industrial Concepts) 0	09:40 DOE Office of Science SBIRs for Nuclear Physics - Michelle Shinn (DOE NP Industrial Concepts) 0
	09:05 Quantum Materials for Axion Searches - Alexander Miller (Stockholm U.) 0				10:10 --- Break ---	10:30 HEP-Industry partnerships panel - Gabriela Carri (BNL) (until 12:30) 0
	09:35 Superconducting Sensors for Coherent Neutrino Scattering - Patrick Harrington (MIT Lincoln Labs) 0				10:30 Panel Discussion - Hartmut Sadrozinski (UCSC) Ken Marken (DOE HEP Accelerator R&D) Juan Estrada (Fermilab) Michelle Shinn (DOE NP Industrial Concepts) Aritoki Suzuki Stephen Holland 0	10:30 Panel Discussion - Hartmut Sadrozinski (UCSC) Ken Marken (DOE HEP Accelerator R&D) Juan Estrada (Fermilab) Michelle Shinn (DOE NP Industrial Concepts) Aritoki Suzuki Stephen Holland 0
	09:55 Ultra-low background at PNNL - Materials to measurements and the environment - James Moran (PNNL) 0					
	10:15 --- Break ---					
	10:45 Bio/MS/Chem panel - Kimberly Palladino Petra Merket (Fermilab) (until 12:45) 0					
	10:45 Panel Discussion - Will Oliver (Lincoln Labs) Patrick Harrington (Lincoln Labs) Ben Jones (UTA) Sinead Griffin Francois Leonard (Sandia NL) Hiranya Peiris (Stockholm U.) 0					
PM						





What are we going to do?

- Focus on Turning LOI's into white papers
- Monthly meetings with LOI white paper writers



LOIs → Papers

- Our next steps are to review the White Paper list again and see if there are new or missing topics
- Then identify lead authors for each white paper and then to get content/input from the other LOI authors
- IF9 White Papers (preliminary list)
 - “Gravitation” --- All things gravity
 - “Coupling Experiment and Simulation” –
 - Cross section measurements for simulation
 - Modeling non-equilibrium quasiparticle dynamics
 - “Microwave and RF Technologies”
 - Circulators, quantum-limited transistor amplifiers
 - “Facilities – Foundries”
 - Si, Ge, III-IV, Superconductors; Rad Hard processes and processing; MIT-LL
 - “Facilities – Calibration and Test Beam”
 - Water Cernkov at CERN, proton and electron test beams, irradiation facilities
 - “Facilities – Low background, Low Noise, Low Temperature”
 - Underground facilities, underground argon supply, SC detector facility, mK Test Facility; Environmentally stable facility
 - “Facilities - Telescopes for On-sky Instrument development”
 - Two proposals, one broader and one focused on Vera Rubin Observatory
 - “Collaborative R&D Programs and Interdisciplinary Research”
 - Aka MultiHEP Workshops