

Low Radioactivity Techniques (LRT2022)

Tuesday, June 14, 2022

LRT 2022 - presentations: Welcome / Global Underground Laboratories - EEP 252 (8:45 AM - 10:10 AM)

-Conveners: Sean Paling

time	[id] title	presenter
8:45 AM	[66] Welcome	HEISE, Jaret Dr DAVIS, Ralph SCHNEE, Richard
9:00 AM	[65] Stanley Howard Lecture	KELLAR, Jon
9:20 AM	[67] Underground Facilities - Americas	HEISE, Jaret
9:45 AM	[49] Overview and Status of Underground Labs in Asia	Dr LEONARD, Douglas S.

LRT 2022 - presentations: Global Underground Laboratories / Screening Facilities - EEP 252 (11:05 AM - 12:10 PM)

-Conveners: Richard Ford

time	[id] title	presenter
11:05 AM	[68] Underground Facilities - Europe	PALING, Sean
11:30 AM	[7] Confronting the radiological screening challenges for next-generation rare event detectors	LIU, XinRan
11:50 AM	[60] Counting Facilities at the Black Hills Underground Campus (BHUC)	TIEDT, Doug

Wednesday, June 15, 2022

LRT 2022 - presentations: Fabrication Methods - EEP 252 (8:30 AM - 10:00 AM)

-Conveners: Alvine Kamaha

time	[id] title	presenter
8:30 AM	[62] Additive manufacturing techniques for producing low-background scintillators and materials for rare-event searches	FEBBRARO, Michael
8:55 AM	[69] Additive Manufacturing at LNGS: Facilities, Metals Testing and Future Capabilities	ORLANDI, Donato
9:20 AM	[70] Update on Electroforming Plans and Facilities	HOPPE, E. W.
9:45 AM	[8] Ultra-low background flexible cables	SALDANHA, Richard

LRT 2022 - presentations: Particle Background impacts on Quantum Information Systems and Quantum Computing - EEP 252 (10:30 AM - 12:10 PM)

-Conveners: Brianna Mount

time	[id] title	presenter
10:30 AM	[71] The Interplay of Radioactivity and Quantum Science	FORMAGGIO, Joseph
10:50 AM	[72] Backgrounds in Qubits	HALL, Jeter
11:10 AM	[73] Quantum Sensors for Direct Detection of Sub-GeV Dark Matter	KURINSKY, Noah
11:30 AM	[74] From signal to noise -- athermal phonon mitigation in quantum devices	LI, XinRan
11:50 AM	[85] Impact of environmental and materials radioactive contamination in superconducting quantum bits	D'IMPERIO, Giulia

LRT 2022 - presentations: Surface Contamination Control - EEP 252 (1:30 PM - 3:05 PM)

-Conveners: Juergen Reichenbacher

time	[id] title	presenter
1:30 PM	[75] Removal of long-lived radon daughters from surfaces	ZUZEL, Grzegorz
1:55 PM	[12] Simulation studies on radon daughter plateout background in nEXO	TSANG, Hei Man (Raymond)
2:10 PM	[13] Radon daughter plate-out as a background source in nEXO experiment	CHERNYAK, Dmitry
2:25 PM	[59] Development of an ultralow-background bolometric alpha detector for the measurement of surface contamination	Mr BENATO, Giovanni
2:40 PM	[55] Exploration of Methods to Remove Implanted Pb-210 and Po-210 Contamination from Silicon Surfaces	Dr ARNQUIST, Isaac

LRT 2022 - presentations: Purification Techniques for Solids / Radon Detector - EEP 252 (4:40 PM - 6:00 PM)

-Conveners: Eric Hoppe

time	[id] title	presenter
4:40 PM	[38] Ultra-low background NaI(Tl) crystals for dark matter direct search	D'ANGELO, DAVIDE
5:00 PM	[41] Purification of sodium iodide powder for the COSINE-200 experiment	SHIN, Keonah
5:15 PM	[27] Purification of CaF ₂ crystal for double beta decay experiment	FUSHIMI, Ken-Ichi

5:30 PM	[44] Preparation of the precursors for AMoRE-II crystals synthesis	GILEVA, Olga
5:45 PM	[50] Recent progresses of the radon detector with an electrostatic collection	NAKANO, Yuuki

Thursday, June 16, 2022

LRT 2022 - presentations: Purification Techniques for Liquids & Gases, incl. Rn - EEP 252 (8:30 AM - 10:00 AM)

-Conveners: Markus Horn

time	[id] title	presenter
8:30 AM	[26] Background measurements for Jinping Neutrino 1-t prototype at CJPL	WU, Yiyang
8:45 AM	[21] Improving nEXO Sensitivity with Radon Distillation	MONG, Brian
9:10 AM	[61] Krypton Removal via Gas Chromatography for the LZ Experiment	Mr AMES, Drew
9:30 AM	[15] Observation of Radon Mitigation in MicroBooNE by a Liquid Argon Filtration System	ZENNAMO, Joseph
9:45 AM	[19] Material assay campaign of the DarkSide-20k experiment	PESUDO, Vicente

LRT 2022 - presentations: Assay and Screening Techniques - EEP 252 (10:30 AM - 12:10 PM)

-Conveners: Andreas Piepke

time	[id] title	presenter
10:30 AM	[45] Low background study for AMoRE through material screening facility at Y2L and Yemilab	KIM, Gowoon
10:50 AM	[25] OSIRIS - The Online Scintillator Internal Radioactivity Investigation System of JUNO	VOLLBRECHT, Moritz Cornelius
11:05 AM	[52] Use of QQQ-ICP-MS for Ultra Low Background Measurements	FRENCH, Amanda
11:20 AM	[20] Measurement of the argon purity by ICPMS and results of the analysis of the argon used for the MicroBooNE and ArDM experiments	Dr SANTORELLI, Roberto
11:35 AM	[29] Radon Emanation Techniques and Measurements for LZ	CHOTT, Nicholas
11:50 AM	[37] The Stawell Underground Physics Laboratory	BIGNELL, Lindsey

Friday, June 17, 2022

LRT 2022 - presentations: Community Coordination and Databases / Cosmogenic Backgrounds & Material Activation - EEP 252 (8:30 AM - 10:00 AM)

-Conveners: Vitaly Kudryavtsev

time	[id] title	presenter
8:30 AM	[76] Community Coordination and the Material Screening and Assay Program at SNOLAB	SCORZA, Silvia
8:55 AM	[77] Low background counting calibration methods and considerations	THOMAS, Keenan
9:20 AM	[78] The Snowmass UF Supporting Capabilities topical group report	KAMAHA, Alvine
9:40 AM	[79] Cosmogenic background and its consequences for rare event searches with germanium	MASSARCZYK, Ralph

LRT 2022 - presentations: Cosmogenic Backgrounds & Material Activation / Experiment Backgrounds, Models & Simulations (1) - EEP 252 (10:30 AM - 12:05 PM)

-Conveners: Pia Loaiza

time	[id] title	presenter
10:30 AM	[80] Muon-induced background in a next-generation dark matter experiment based on liquid xenon	PEC, Viktor
10:55 AM	[30] Methodology used in Borexino for the identification of cosmogenic long-time decay background	PORCELLI, alessio
11:10 AM	[84] The nEXO Background Control Program	PIEPKE, Andreas
11:30 AM	[54] Modeling Backgrounds for the MAJORANA DEMONSTRATOR	HAUFE, Christopher
11:50 AM	[14] Background Mitigation Techniques in LEGEND	LEHNERT, Bjoern

LRT 2022 - presentations: Experiment Backgrounds, Models & Simulations (2) - EEP 252 (1:30 PM - 3:00 PM)

-Conveners: Douglas Leonard

time	[id] title	presenter
1:30 PM	[35] Track-induced low energy backgrounds	EGAÑA-UGRINOVIC, Daniel
1:55 PM	[81] Stress Induced Background in Cryogenic Crystal Calorimeters	ROMANI, Roger
2:15 PM	[31] The background rejection capabilities of highly-pixelated solid-state detectors	Prof. CHAVARRIA, Alvaro
2:30 PM	[28] Radiogenic background control strategy for the JUNO experiment	BARRESI, Andrea
2:45 PM	[36] Neutron yield calculation with SOURCES4 and comparison with other codes and experimental data	Prof. KUDRYAVTSEV, Vitaly

LRT 2022 - presentations: Experiment Backgrounds, Models & Simulations (3) - EEP 252 (3:30 PM - 4:50 PM)

-Conveners: Jaret Heise

time	[id] title	presenter
3:30 PM	[83] External Radiological Backgrounds for the DUNE Experiment at Sanford Lab	REICHENBACHER, Jürgen

3:45 PM	[82] Low radioactivity argon for rare event searches	SHARMA POUDEL, Sagar
4:05 PM	[16] ^{42}Ar background in nEXO	VEERARAGHAVAN, Venkatesh
4:20 PM	[9] Latest results from the CUORE experiment: $0\nu\beta\beta$ limit and background model	Dr WELLIVER, Bradford
4:35 PM	[23] The background model of the CUPID-Mo experiment	LOAIZA, Pia