

# Lake Louise Winter Institute 2024



## Report of Contributions

Contribution ID: **363**

Type: **not specified**

## Physics at LHC

*Monday 19 February 2024 08:35 (1 hour)*

**Presenter:** ALISON, John (Carnegie-Mellon University (US))

**Session Classification:** Monday

Contribution ID: **364**

Type: **not specified**

## **Dark matter search with JWST**

*Monday 19 February 2024 17:00 (1 hour)*

**Presenter:** ILIE, Cosmin (Colgate University)

**Session Classification:** Monday

Contribution ID: 365

Type: **not specified**

## High precision physics at LHC

*Tuesday 20 February 2024 09:30 (1 hour)*

**Presenter:** MELNIKOV, Kirill (KIT)

**Session Classification:** Tuesday

Contribution ID: 366

Type: **not specified**

## **Hawking radiation and the time evolution of an analogue black hole**

*Tuesday 20 February 2024 20:00 (1 hour)*

**Presenter:** STEINHAUER, Jeff

**Session Classification:** Tuesday

Contribution ID: **367**

Type: **not specified**

## **Gravitational Labs for Nuclear Physics**

*Tuesday 20 February 2024 21:00 (1 hour)*

### **Summary**

**Presenter:** ESSICK, Reed

**Session Classification:** Tuesday

Contribution ID: 368

Type: **not specified**

# Advances and perspectives of Neutrino Physics Experiments

*Wednesday 21 February 2024 17:25 (1 hour)*

**Presenter:** SCHUKRAFT, Anne

**Session Classification:** Wednesday

Contribution ID: **369**

Type: **not specified**

## Flavor physics

*Wednesday 21 February 2024 08:30 (1 hour)*

**Presenter:** LENZ, Alexander

**Session Classification:** Wednesday



Contribution ID: 370

Type: **not specified**

# The Landscape of Cosmic Possibilities

*Friday 23 February 2024 08:30 (1 hour)*

## Summary

**Presenter:** DROR, Jeff

**Session Classification:** Friday

Contribution ID: 371

Type: **not specified**

## How to measure gravity by holding atoms

*Friday 23 February 2024 18:50 (1 hour)*

**Presenter:** PANDA, Cris

**Session Classification:** Friday

Contribution ID: 372

Type: **not specified**

## **New Models of Baryogenesis and How to Find Them**

*Thursday 22 February 2024 18:30 (1 hour)*

**Presenter:** IPEK, Seyda

**Session Classification:** Thursday

Contribution ID: 373

Type: **not specified**

## **Properties of the Higgs boson measured by ATLAS collaboration**

*Monday 19 February 2024 09:35 (15 minutes)*

**Presenter:** TSAI, Meng-Ju (University of Michigan)

**Session Classification:** Monday

Contribution ID: 374

Type: **not specified**

## **Probing the nature of electroweak symmetry breaking with Higgs boson pairs in ATLAS**

*Monday 19 February 2024 09:50 (15 minutes)*

**Presenter:** SWIATLOWSKI, Maximilian J (TRIUMF (CA))

**Session Classification:** Monday

Contribution ID: 375

Type: **not specified**

# Recent highlights of top-quark cross section and properties measurements with the ATLAS detector at the LHC

*Tuesday 20 February 2024 10:45 (15 minutes)*

## Summary

**Presenter:** RICHTER, Stefan (Stockholm University (SE))

**Session Classification:** Tuesday

Contribution ID: 376

Type: **not specified**

## **ANAIS-112: First direct test of DAMA/LIBRA beyond three sigma**

*Monday 19 February 2024 18:00 (15 minutes)*

### **Summary**

**Presenter:** MARTINEZ, Maria

**Session Classification:** Monday

Contribution ID: 377

Type: **not specified**

## Lux-Zeppelin

*Monday 19 February 2024 18:30 (15 minutes)*

**Presenter:** ERIKSEN, Sam (University of Bristol (GB))

**Session Classification:** Monday



Contribution ID: 378

Type: **not specified**

## **Lux-Zeppelin**

*Monday 19 February 2024 18:15 (15 minutes)*

**Presenter:** Dr MCLAUGHLIN, Joe

**Session Classification:** Monday

Contribution ID: **379**

Type: **not specified**

## **NEWS-G**

*Monday 19 February 2024 19:00 (15 minutes)*

### **Summary**

**Presenter:** GROS, Philippe

**Session Classification:** Monday

Contribution ID: **380**

Type: **not specified**

## **XENON / DARWIN**

*Monday 19 February 2024 19:15 (15 minutes)*

**Presenter:** YUAN, Lanqing

**Session Classification:** Monday

Contribution ID: **381**

Type: **not specified**

## **PANDAX-4T**

**Presenter:** ZHOU, Xiaopeng

**Session Classification:** Monday

Contribution ID: **382**

Type: **not specified**

## **PICO**

*Monday 19 February 2024 19:30 (15 minutes)*

**Presenter:** SAVOIE, Jeremy

**Session Classification:** Monday

Contribution ID: **383**

Type: **not specified**

## **DEAP-3600 Dark Matter Experiment**

*Monday 19 February 2024 19:45 (15 minutes)*

### **Summary**

**Presenter:** JIGMEDDORJ, Badamsambuu

**Session Classification:** Monday

Contribution ID: **384**

Type: **not specified**

## **DarkSide**

*Tuesday 20 February 2024 08:30 (15 minutes)*

**Presenter:** MARICIC, Jelena (University of Hawaii)

**Session Classification:** Tuesday

Contribution ID: **385**

Type: **not specified**

## **Silicon Photomultiplier (SiPM) Development for ARGO**

*Tuesday 20 February 2024 08:45 (15 minutes)*

### **Summary**

**Presenter:** KOULOSUSAS, Seraphim

**Session Classification:** Tuesday



Contribution ID: **386**

Type: **not specified**

## **ADMX**

*Tuesday 20 February 2024 09:00 (15 minutes)*

**Presenter:** BRAINE, Tom

**Session Classification:** Tuesday

Contribution ID: **387**

Type: **not specified**

## **DELight**

*Tuesday 20 February 2024 09:15 (15 minutes)*

**Presenter:** ENSS, Christian

**Session Classification:** Tuesday

Contribution ID: **388**

Type: **not specified**

## **Recent results on associated top quark production and searches for new top-quark phenomena with the ATLAS detector**

*Tuesday 20 February 2024 11:00 (15 minutes)*

**Presenter:** YACOOB, Sahal (University of Cape Town (ZA))

**Session Classification:** Tuesday

Contribution ID: **389**

Type: **not specified**

## **Probing EFT couplings in the top quark sector**

*Tuesday 20 February 2024 11:15 (15 minutes)*

**Presenter:** MOHRMAN, Kelci Ann (University of Florida (US))

**Session Classification:** Tuesday

Contribution ID: 390

Type: **not specified**

## Recent highlights of top-quark property measurements from CMS

*Tuesday 20 February 2024 11:30 (15 minutes)*

### Summary

**Presenter:** WILDRIDGE, Andrew (Purdue University (US))

**Session Classification:** Tuesday

Contribution ID: **391**

Type: **not specified**

## **Measurements of QCD with the ATLAS Detector**

*Tuesday 20 February 2024 11:45 (15 minutes)*

**Presenter:** BUTTERWORTH, Jonathan (UCL)

**Session Classification:** Tuesday

Contribution ID: 392

Type: **not specified**

## **Precision measurements in W and Z decays with the ATLAS Experiment**

*Friday 23 February 2024 11:40 (15 minutes)*

**Presenter:** Dr SFORZA, Federico (University and INFN Genoa)

**Session Classification:** Friday

Contribution ID: 393

Type: **not specified**

## Vector bosons production and properties at CMS

*Monday 19 February 2024 10:45 (15 minutes)*

**Presenter:** AZZI, Patrizia (INFN Padova (IT))

**Session Classification:** Monday



Contribution ID: 394

Type: **not specified**

## **Search for emerging jets with graph neural networks using CMS Run 2 data**

*Monday 19 February 2024 11:00 (15 minutes)*

**Presenter:** SAVARD, Claire (University of Colorado Boulder (US))

**Session Classification:** Monday

Contribution ID: 395

Type: **not specified**

## **Precision Timing with the CMS MIP Timing Detector for High-Luminosity LHC**

*Monday 19 February 2024 11:15 (15 minutes)*

### **Summary**

**Presenter:** SPITZBART, Daniel (Boston University (US))

**Session Classification:** Monday

Contribution ID: 396

Type: **not specified**

## Searches for Dark Matter with the ATLAS Experiment at the LHC

*Friday 23 February 2024 09:45 (15 minutes)*

### Summary

**Presenter:** BAUCE, Matteo (Sapienza Universita e INFN, Roma I (IT))

**Session Classification:** Friday

Contribution ID: 397

Type: **not specified**

## Searching for additional Higgs bosons at ATLAS

**Presenter:** CAI, Huacheng (University of Pittsburgh (US))

**Session Classification:** Friday

Contribution ID: 398

Type: **not specified**

## Testing the electroweak theory in multiboson measurements in ATLAS

*Monday 19 February 2024 10:05 (15 minutes)*

**Presenter:** KHORIAULI, Gia (Julius Max. Universitaet Wuerzburg (DE))

**Session Classification:** Monday

Contribution ID: **399**

Type: **not specified**

## ALICE

*Friday 23 February 2024 17:00 (20 minutes)*

**Presenter:** GARCIA-SOLIS, Edmundo (Chicago State University (US))

**Session Classification:** Friday

Contribution ID: **400**

Type: **not specified**

## **Light exotics at BESIII**

*Friday 23 February 2024 17:50 (15 minutes)*

**Presenter:** HAN, Tingting

**Session Classification:** Friday

Contribution ID: **401**

Type: **not specified**

## **Hyperon physics at BESIII**

*Friday 23 February 2024 18:05 (15 minutes)*

**Presenter:** SHEN, Hongfei

**Session Classification:** Friday



Contribution ID: **402**

Type: **not specified**

## **NA62**

*Friday 23 February 2024 17:35 (15 minutes)*

**Presenter:** WONG, Vincent Wai Sum (TRIUMF (CA))

**Session Classification:** Friday

Contribution ID: **403**

Type: **not specified**

## **MEG-II**

*Friday 23 February 2024 17:20 (15 minutes)*

**Presenter:** OYA, Atsushi

**Session Classification:** Friday

Contribution ID: 404

Type: **not specified**

## **Searches for BSM physics in low-mass, non-resonant, or long-lived signatures with the ATLAS detector**

*Friday 23 February 2024 10:40 (15 minutes)*

### **Summary**

**Presenters:** TSAI, Meng-Ju (University of Michigan); DAI, Tiesheng (University of Michigan (US))

**Session Classification:** Friday

Contribution ID: 405

Type: **not specified**

## Searches for Exotic Heavy Resonances with the ATLAS detector

*Friday 23 February 2024 10:55 (15 minutes)*

**Presenter:** MARJANOVIC, Marija (University of Oklahoma (US))

**Session Classification:** Friday

Contribution ID: 406

Type: **not specified**

## **Searches for resonances decaying to pairs of heavy bosons in ATLAS**

*Friday 23 February 2024 11:10 (15 minutes)*

**Presenter:** CONVENTI, Francesco

**Session Classification:** Friday

Contribution ID: 408

Type: **not specified**

## **Enhancing CMS low-mass searches with data scouting: from Run 2 to Run 3**

*Friday 23 February 2024 11:25 (15 minutes)*

**Presenter:** FONTANESI, Elisa (Boston University (US))

**Session Classification:** Friday

Contribution ID: **409**

Type: **not specified**

## **Searches for Supersymmetry with CMS**

*Friday 23 February 2024 10:00 (15 minutes)*

**Presenter:** DUTTA, Valentina (Carnegie-Mellon University (US))

**Session Classification:** Friday

Contribution ID: **410**

Type: **not specified**

## **FASER BSM**

*Friday 23 February 2024 09:30 (15 minutes)*

**Presenter:** WELCH, Eli

**Session Classification:** Friday



Contribution ID: **411**

Type: **not specified**

## **DarkLight**

*Friday 23 February 2024 18:35 (15 minutes)*

### **Summary**

**Presenter:** MILLER, Laura (TRIUMF (CA))

**Session Classification:** Friday

Contribution ID: **412**

Type: **not specified**

## **Pierre Auger**

*Thursday 22 February 2024 17:45 (15 minutes)*

**Presenter:** NITZ, David (Michigan Technological University)

**Session Classification:** Thursday

Contribution ID: 413

Type: **not specified**

## HAWC

*Thursday 22 February 2024 18:00 (15 minutes)*

**Presenter:** GOODMAN, Jordan A.

**Session Classification:** Thursday

Contribution ID: 414

Type: **not specified**

## Search for B-mesogenesis at BABAR

*Wednesday 21 February 2024 09:30 (15 minutes)*

**Presenter:** ECHENARD, Bertrand (California Institute of Technology (US))

**Session Classification:** Wednesday

Contribution ID: 415

Type: **not specified**

## **Semileptonic decays at Belle and Belle II (incl. LUV measurements)**

*Wednesday 21 February 2024 09:45 (15 minutes)*

**Presenter:** VAN TONDER, Raynette (McGill University)

**Session Classification:** Wednesday

Contribution ID: 416

Type: **not specified**

## **Electroweak and radiative penguin B meson decays at Belle and Belle II**

*Wednesday 21 February 2024 10:00 (15 minutes)*

**Presenter:** DE MARINO, Gaetano (Jožef Stefan Institute)

**Session Classification:** Wednesday

Contribution ID: 417

Type: **not specified**

# Charm and beauty hadron decays at Belle and Belle II

*Wednesday 21 February 2024 10:15 (15 minutes)*

**Presenter:** SKORUPA, Justin

**Session Classification:** Wednesday

Contribution ID: **418**

Type: **not specified**

## Measurement of $|V_{cb}|$ at BaBar

*Wednesday 21 February 2024 10:45 (15 minutes)*

**Presenter:** WILSON, Fergus (Science and Technology Facilities Council STFC (GB))

**Session Classification:** Wednesday



Contribution ID: **419**

Type: **not specified**

## **Tau and low multiplicity decays at Belle and Belle II**

*Wednesday 21 February 2024 11:00 (15 minutes)*

### **Summary**

**Presenter:** WALLNER, Stefan (Max Planck Institute for Physics)

**Session Classification:** Wednesday

Contribution ID: 420

Type: **not specified**

## **Measurement of beam polarization at an e+e- B-Factory with a new tau polarimetry technique**

*Wednesday 21 February 2024 11:15 (15 minutes)*

**Presenter:** MILLER, Caleb

**Session Classification:** Wednesday

Contribution ID: 421

Type: **not specified**

## **CP Violation in Beauty to Open Charm at LHCb**

*Wednesday 21 February 2024 11:30 (15 minutes)*

### **Summary**

**Presenter:** DAVIES, Jonathan (University of Manchester (GB))

**Session Classification:** Wednesday

Contribution ID: 422

Type: **not specified**

## Exotic multiquark states at LHCb

*Wednesday 21 February 2024 11:45 (15 minutes)*

### Summary

**Presenter:** CAPRIOTTI, Lorenzo (Universita e INFN, Ferrara (IT))

**Session Classification:** Wednesday

Contribution ID: 423

Type: **not specified**

## **Hyper-Kamiokande Project Updates: Its Physics Program and Current R&D progress**

*Thursday 22 February 2024 11:00 (15 minutes)*

**Presenter:** KOERICH, Luan

**Session Classification:** Thursday

Contribution ID: 424

Type: **not specified**

## BeEST

*Thursday 22 February 2024 11:45 (15 minutes)*

**Presenter:** LENNARZ, Annika (TRIUMF)

**Session Classification:** Thursday

Contribution ID: 425

Type: **not specified**

## **T2K**

*Thursday 22 February 2024 10:15 (15 minutes)*

**Presenter:** NUGENT, John

**Session Classification:** Thursday

Contribution ID: **426**

Type: **not specified**

## **DUNE**

*Thursday 22 February 2024 11:30 (15 minutes)*

**Presenter:** MARICIC, Jelena (University of Hawaii)

**Session Classification:** Thursday



Contribution ID: 427

Type: **not specified**

## MicroBoone

*Thursday 22 February 2024 11:15 (15 minutes)*

**Presenter:** WU, Wanwei

**Session Classification:** Thursday

Contribution ID: 428

Type: **not specified**

## IceCube low-energy + upgrade

*Thursday 22 February 2024 10:45 (15 minutes)*

**Presenter:** BLOT, Summer (DESY Zeuthen)

**Session Classification:** Thursday

Contribution ID: **429**

Type: **not specified**

## **NOvA**

*Thursday 22 February 2024 10:30 (15 minutes)*

### **Summary**

**Presenter:** WU, Wenjie (University of California, Irvine)

**Session Classification:** Thursday

Contribution ID: 430

Type: **not specified**

## Status of AMoRE Experiment

*Thursday 22 February 2024 09:00 (15 minutes)*

### Summary

**Presenter:** KIM, Gowoon

**Session Classification:** Thursday

Contribution ID: **431**

Type: **not specified**

## CUPID

*Thursday 22 February 2024 08:45 (15 minutes)*

**Presenter:** TORRES, Jorge (Yale University)

**Session Classification:** Thursday

Contribution ID: **432**

Type: **not specified**

## LEGEND

*Wednesday 21 February 2024 18:55 (15 minutes)*

**Presenter:** BOS, Brady (University of North Carolina - Chapel Hill)

**Session Classification:** Wednesday

Contribution ID: 433

Type: **not specified**

## **Kamland-Zen**

*Wednesday 21 February 2024 18:40 (15 minutes)*

**Presenter:** MIYAKE, Haruhiko

**Session Classification:** Wednesday

Contribution ID: **434**

Type: **not specified**

## **CUORE**

*Thursday 22 February 2024 08:30 (15 minutes)*

**Presenter:** KOWALSKI, Rebecca

**Session Classification:** Thursday



Contribution ID: 435

Type: **not specified**

## **Katrin**

*Wednesday 21 February 2024 18:25 (15 minutes)*

**Presenter:** BLOCK, Fabian

**Session Classification:** Wednesday

Contribution ID: **436**

Type: **not specified**

## **FaserNu**

*Thursday 22 February 2024 09:15 (15 minutes)*

**Presenter:** OHASHI, Ken

**Session Classification:** Thursday

Contribution ID: 437

Type: **not specified**

## **SND @ LHC**

*Thursday 22 February 2024 09:30 (15 minutes)*

**Presenter:** CONABOY, Andrew Picot (Humboldt University of Berlin (DE))

**Session Classification:** Thursday

Contribution ID: **438**

Type: **not specified**

## **MINERvA**

*Thursday 22 February 2024 09:45 (15 minutes)*

**Presenter:** MEHMOOD, Maria

**Session Classification:** Thursday

Contribution ID: **439**

Type: **not specified**

## **KM3NeT**

*Thursday 22 February 2024 17:00 (15 minutes)*

**Presenter:** LAMOUREUX, Mathieu (CP3, UCLouvain)

**Session Classification:** Thursday

Contribution ID: 440

Type: **not specified**

## **IceCube astro+Gen2**

*Thursday 22 February 2024 17:15 (15 minutes)*

**Presenter:** HAACK, Christian

**Session Classification:** Thursday

Contribution ID: **441**

Type: **not specified**

## **P-ONE**

*Thursday 22 February 2024 17:30 (15 minutes)*

### **Summary**

**Presenter:** DANNINGER, Matthias (Simon Fraser University (CA))

**Session Classification:** Thursday

Contribution ID: 442

Type: **not specified**

# **Higgs boson production and decay rate measurements and their interpretation with the ATLAS experiment**

*Monday 19 February 2024 11:30 (15 minutes)*

## **Summary**

**Presenter:** WANG, Weitao (University of Iowa (US))

**Session Classification:** Monday



Contribution ID: 443

Type: **not specified**

## Searching for additional Higgs bosons at ATLAS

*Monday 19 February 2024 11:45 (15 minutes)*

**Presenter:** BARAK, Liron (Tel Aviv University)

**Session Classification:** Monday

Contribution ID: 444

Type: **not specified**

## Welcome

*Monday 19 February 2024 08:30 (5 minutes)*

**Presenters:** PENIN, Alexander; YANEZ GARZA, Juan Pablo

**Session Classification:** Monday

Contribution ID: 445

Type: **not specified**

## Closing remarks

*Friday 23 February 2024 19:50 (5 minutes)*

**Presenter:** PENIN, Alexander

**Session Classification:** Friday