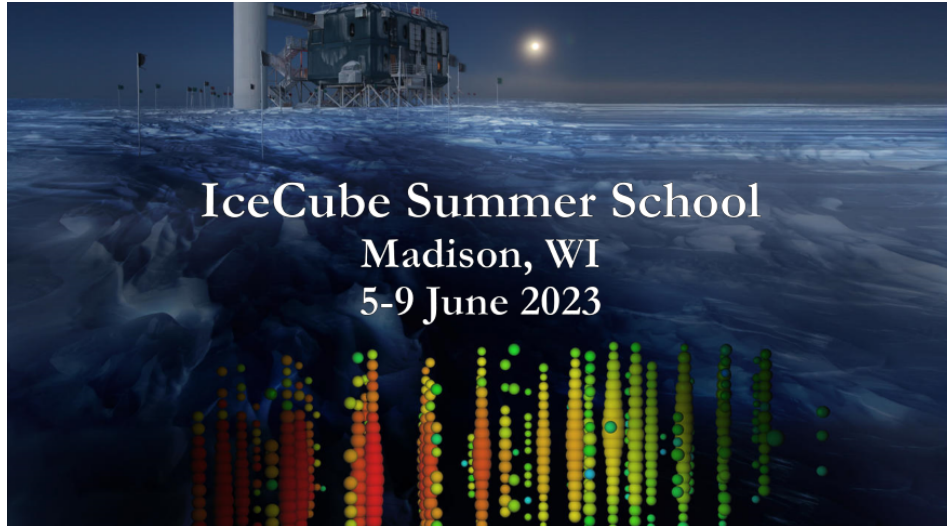# IceCube Summer School 2023



# Report of Contributions

Contribution ID: **1**                                              Type: **not specified**

# IceCube Detector

*Monday, 5 June 2023 09:30 (30 minutes)*

**Primary author:**   KELLEY, John (University of Wisconsin–Madison)

**Presenter:**   KELLEY, John (University of Wisconsin–Madison)

**Session Classification:**   Physics

Contribution ID: **2**                                    Type: **not specified**

# IceCube Science

*Monday, 5 June 2023 09:00 (30 minutes)*

**Primary author:** HALZEN, Francis (University of Wisconsin–Madison)

**Presenter:** HALZEN, Francis (University of Wisconsin–Madison)

**Session Classification:** Physics

Contribution ID: **3**                                    Type: **not specified**

# Neutrino Physics & Oscillations

*Monday, 5 June 2023 11:00 (30 minutes)*

**Primary author:** Prof. AGARWALLA, Sanjib (Department of Physics & Wisconsin IceCube Particle Astrophysics Center, University of Wisconsin)

**Presenter:** Prof. AGARWALLA, Sanjib (Department of Physics & Wisconsin IceCube Particle Astrophysics Center, University of Wisconsin)

**Session Classification:** Physics

Contribution ID: 4                                                        Type: **not specified**

# Multimessenger Astrophysics

*Monday, 5 June 2023 10:00 (30 minutes)*

**Primary author:**   DESAI, Abhishek (University of Wisconsin–Madison)

**Presenter:**   DESAI, Abhishek (University of Wisconsin–Madison)

**Session Classification:**   Physics

Contribution ID: 5    Type: **not specified**

# Diversity, Equity, and Inclusion

*Monday, 5 June 2023 11:30 (15 minutes)*

**Primary author:** BECHTOL, Ellen (University of Wisconsin–Madison)

**Presenter:** BECHTOL, Ellen (University of Wisconsin–Madison)

**Session Classification:** Diversity, Equity, and Inclusion

Contribution ID: **6**                                              Type: **not specified**

# Intro to Python

*Monday, 5 June 2023 13:00 (1 hour)*

**Primary author:**   BUTTERFIELD, Delaney (o=uwmad,ou=Institutions,dc=icecube,dc=wisc,dc=edu)

**Presenter:**   BUTTERFIELD, Delaney (o=uwmad,ou=Institutions,dc=icecube,dc=wisc,dc=edu)

**Session Classification:**   Computing

Contribution ID: **7**  Type: **not specified**

# Advanced Python

*Monday, 5 June 2023 13:00 (1 hour)*

**Primary author:** ASHIDA, Yosuke (University of Wisconsin–Madison)

**Presenter:** ASHIDA, Yosuke (University of Wisconsin–Madison)

**Session Classification:** Computing

Contribution ID: **8**    Type: **not specified**

# Coding Best Practices

*Monday, 5 June 2023 14:30 (1 hour)*

**Primary author:**   SAVINA, Pierpaolo (University of Wisconsin–Madison)

**Presenter:**   SAVINA, Pierpaolo (University of Wisconsin–Madison)

**Session Classification:**   Computing

Contribution ID: **9**                                        Type: **not specified**

# South Pole

*Tuesday, 6 June 2023 09:00 (30 minutes)*

**Primary author:**   DUVERNOIS, Michael (University of Wisconsin–Madison)

**Presenter:**   DUVERNOIS, Michael (University of Wisconsin–Madison)

**Session Classification:**   Detector

Contribution ID: **10**                                  Type: **not specified**

# IceCube Upgrade

*Tuesday, 6 June 2023 09:30 (30 minutes)*

**Primary author:** DUVERNOIS, Michael (University of Wisconsin–Madison)

**Presenter:** DUVERNOIS, Michael (University of Wisconsin–Madison)

**Session Classification:** Detector

Contribution ID: **11**                                              Type: **not specified**

# Intro to IceTray

*Tuesday, 6 June 2023 10:30 (1h 30m)*

**Primary author:**   MEAGHER, Kevin (University of Wisconsin–Madison)

**Presenter:**   MEAGHER, Kevin (University of Wisconsin–Madison)

**Session Classification:**   Software

Contribution ID: **12**                                               Type: **not specified**

# I3 File Tools & SteamShovel

*Tuesday, 6 June 2023 13:00 (1 hour)*

**Primary author:**   MEAGHER, Kevin (University of Wisconsin–Madison)

**Presenter:**   MEAGHER, Kevin (University of Wisconsin–Madison)

**Session Classification:**   Software

Contribution ID: **13**                                             Type: **not specified**

# GitHub Tutorial

*Tuesday, 6 June 2023 14:30 (1 hour)*

**Primary author:** BALAGOPAL V, Aswathi (UW-Madison)

**Presenter:** BALAGOPAL V, Aswathi (UW-Madison)

**Session Classification:** Computing

Contribution ID: **14**          Type: **not specified**

# Early Career Scientists

*Wednesday, 7 June 2023 14:15 (15 minutes)*

**Primary author:** MOULAI, Marjon (University of Wisconsin, Madison)

**Presenter:** MOULAI, Marjon (University of Wisconsin, Madison)

**Session Classification:** Early Career Scientists

Contribution ID: **15**                                                    Type: **not specified**

# Diffuse neutrinos - from TeV to EeV

*Wednesday, 7 June 2023 10:30 (30 minutes)*

**Primary author:** LU, Lu (University of Wisconsin–Madison)

**Presenter:** LU, Lu (University of Wisconsin–Madison)

**Session Classification:** Physics

Contribution ID: **16**                                         Type: **not specified**

# Cosmic Rays

*Wednesday, 7 June 2023 09:30 (30 minutes)*

**Primary author:**   DESIATI, Paolo (University of Wisconsin–Madison)

**Presenter:**   DESIATI, Paolo (University of Wisconsin–Madison)

**Session Classification:**   Physics

Contribution ID: 17                                           Type: **not specified**

# Detector Physics

*Wednesday, 7 June 2023 11:00 (30 minutes)*

**Primary author:**   VANDENBROUCKE, Justin (University of Wisconsin–Madison)

**Presenter:**   VANDENBROUCKE, Justin (University of Wisconsin–Madison)

**Session Classification:**   Physics

Contribution ID: 18 Type: **not specified**

# Intro to Stats

*Tuesday, 6 June 2023 15:30 (1 hour)*

**Primary author:** BASU, Vedant (University of Wisconsin–Madison)

**Presenter:** BASU, Vedant (University of Wisconsin–Madison)

**Session Classification:** Statistics

Contribution ID: **19**                                      Type: **not specified**

# Advanced Stats

*Wednesday, 7 June 2023 11:30 (1 hour)*

**Primary author:**   HARDIN, John (Massachusetts Institute of Technology)

**Presenter:**   HARDIN, John (Massachusetts Institute of Technology)

**Session Classification:**   Statistics

Contribution ID: **20**                                    Type: **not specified**

# Calibration and Ice Models

*Wednesday, 7 June 2023 14:30 (2 hours)*

**Primary author:**    WILLIAMS, Dawn (University of Alabama)

**Presenter:**    WILLIAMS, Dawn (University of Alabama)

**Session Classification:** Detector

Contribution ID: **21**                                                   Type: **not specified**

# Neutrino detection with radio antennas

*Thursday, 8 June 2023 09:30 (30 minutes)*

**Primary author:**   BISHOP, Abigail (University of Wisconsin–Madison)

**Presenter:**   BISHOP, Abigail (University of Wisconsin–Madison)

**Session Classification:**   Physics

Contribution ID: **22**                                    Type: **not specified**

# Analyses in IceCube

*Thursday, 8 June 2023 10:00 (30 minutes)*

**Primary author:**   ERPENBECK, Hannah (RWTH Aachen University)

**Presenter:**   ERPENBECK, Hannah (RWTH Aachen University)

**Session Classification:**   Physics

Contribution ID: **23**                                    Type: **not specified**

# Distributed Computing - NPX

*Thursday, 8 June 2023 11:00 (1h 20m)*

**Primary author:**   SCHULTZ, David (University of Wisconsin–Madison)

**Presenter:**   SCHULTZ, David (University of Wisconsin–Madison)

**Session Classification:**   Computing

Contribution ID: 24                                          Type: **not specified**

# Using the Grid

*Thursday, 8 June 2023 13:20 (40 minutes)*

**Primary author:**   SCHULTZ, David (University of Wisconsin–Madison)

**Presenter:**   SCHULTZ, David (University of Wisconsin–Madison)

**Session Classification:**   Computing

Contribution ID: **25**                                    Type: **not specified**

# Point sources

*Thursday, 8 June 2023 14:00 (30 minutes)*

**Primary author:**   OSBORN, Jesse (University of Wisconsin - Madison)

**Presenter:**   OSBORN, Jesse (University of Wisconsin - Madison)

**Session Classification:**   Point source exercise

Contribution ID: **26**
Type: **not specified**

# Point source exercise - worktime

*Thursday, 8 June 2023 14:45 (1h 15m)*

**Primary author:** OSBORN, Jesse (University of Wisconsin - Madison)

**Co-author:** SAVINA, Pierpaolo (University of Wisconsin–Madison)

**Presenters:** OSBORN, Jesse (University of Wisconsin - Madison); SAVINA, Pierpaolo (University of Wisconsin–Madison)

**Session Classification:** Point source exercise

Contribution ID: **27**                                            Type: **not specified**

# Event Selections

*Friday, 9 June 2023 09:00 (30 minutes)*

**Primary author:**   MOULAI, Marjon (University of Wisconsin, Madison)

**Presenter:**   MOULAI, Marjon (University of Wisconsin, Madison)

**Session Classification:**   Detector

Contribution ID: **28** Type: **not specified**

# IceCube-Gen2

*Friday, 9 June 2023 09:30 (30 minutes)*

**Primary author:** KARLE, Albrecht (University of Wisconsin–Madison)

**Presenter:** KARLE, Albrecht (University of Wisconsin–Madison)

**Session Classification:** Detector

Contribution ID: 29                                              Type: **not specified**

# Filtering

*Friday, 9 June 2023 10:30 (30 minutes)*

**Primary author:**   BLAUFUSS, Erik (University of Maryland)

**Presenter:**   BLAUFUSS, Erik (University of Maryland)

**Session Classification:**   Detector

Contribution ID: **30**                                   Type: **not specified**

# Event Reconstructions

*Friday, 9 June 2023 11:00 (30 minutes)*

**Primary author:** YUAN, Tianlu (University of Wisconsin–Madison)

**Presenter:** YUAN, Tianlu (University of Wisconsin–Madison)

**Session Classification:** Detector

Contribution ID: **31**                                              Type: **not specified**

# Simulation

*Friday, 9 June 2023 11:30 (30 minutes)*

**Primary author:**   Dr DÍAZ VÉLEZ, Juan Carlos (University of Wisconsin–Madison)

**Presenter:**   Dr DÍAZ VÉLEZ, Juan Carlos (University of Wisconsin–Madison)

**Session Classification:**   Software

Contribution ID: **32**                                      Type: **not specified**

# Diffuse exercise

*Friday, 9 June 2023 13:00 (30 minutes)*

**Primary author:**   BASU, Vedant (University of Wisconsin–Madison)

**Co-author:**   ERPENBECK, Hannah (RWTH Aachen University)

**Presenters:**   ERPENBECK, Hannah (RWTH Aachen University);  BASU, Vedant (University of Wisconsin–Madison)

**Session Classification:**   Diffuse exercise

Contribution ID: **33**                                               Type: **not specified**

# Diffuse exercise - worktime

*Friday, 9 June 2023 13:45 (1h 15m)*

**Primary author:**   BASU, Vedant (University of Wisconsin–Madison)

**Co-author:**   ERPENBECK, Hannah (RWTH Aachen University)

**Presenters:**   ERPENBECK, Hannah (RWTH Aachen University);  BASU, Vedant (University of Wisconsin–Madison)

**Session Classification:**  Diffuse exercise

Contribution ID: **34**                                    Type: **not specified**

# Poster presentation

*Wednesday, 7 June 2023 14:10 (5 minutes)*

**Primary author:**   STANLEY, Rae

**Presenter:**   STANLEY, Rae

**Session Classification:**   Early Career Scientists

Contribution ID: **35**                                                    Type: **not specified**

# Terrace Welcome

*Monday, 5 June 2023 16:00 (2 hours)*

Join us at the Terrace for an informal welcome-to-Madison!

Google Maps to the Terrace: https://goo.gl/maps/amUTx4SeLM87DC166

**Session Classification:** Social events

Contribution ID: **36**                                              Type: **not specified**

# Board game night

*Thursday, 8 June 2023 18:00 (2 hours)*

Join us for an informal board game night!

Held at the physics department (Chamberlin hall): https://goo.gl/maps/XrFb5htFS7zzX2T56

**Session Classification:**  Social events

Contribution ID: **37** Type: **not specified**

# Group photo!

*Wednesday, 7 June 2023 12:30 (15 minutes)*