# BRIAN A. CLARK

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## ACADEMIC APPOINTMENTS

**Assistant Professor** 2023-Present
The University of Maryland, College Park, MD USA

**NSF Astronomy and Astrophysics Postdoctoral Fellow** 2019-2022
Michigan State University, East Lansing, MI USA

**NSF Graduate Research Fellow** 2016-2019
The Ohio State University, Columbus, OH USA

**Teaching Assistant** 2015-2016
The Ohio State University, Columbus, OH USA

## EDUCATION

**Ph.D. in Physics, The Ohio State University**, Columbus, Ohio USA 2014-2019
Thesis: *Optimization of a Search for Ultra-High Energy Neutrinos in Four Years of Data of ARA Station 2*
Advisor: Prof. Amy Connolly

**M.S. in Physics, The Ohio State University**, Columbus, Ohio USA 2014-2016

**B.A. in Physics, Washington University in St. Louis**, St. Louis, Missouri USA 2010-2014
*Cum Laude*, Advisor: Prof. Henric Krawczynski

## FELLOWSHIPS and AWARDS

| | |
|---|---|
| NSF Astronomy and Astrophysics Postdoctoral Fellowship | 2019-2022 |
| Japanese Society for the Promotion of Science Postdoctoral Fellowship | 2022 |
| NSF Graduate Research Fellowship | 2016-2019 |
| OSU Graduate Enrichment Fellowship | 2014-2015 |
| WUSTL Undergraduate Physics Research Fellow | 2011 |
| APS Division of Astrophysics Travel Award | 2017, 2019 |
| Bunny and Thomas Clark Graduate Scholarship Honorable Mention | 2019 |

## EXTERNAL FUNDING

**PI of NSF Award PHY-1903885 – $148,000** 2023/09-2025/08
"*Collaborative Research: WoU-MMA: Ultrahigh Energy Neutrinos with the Radio Neutrino Observatory in Greenland*"

**PI of NSF Award AST-1903885 – $328,750** 2019/08-2022/12
"*Unveiling the Ultra-High Energy Universe with Neutrinos*"

**SELECTED PUBLICATIONS (h-index = 29)**

It is the policy of the ARA and IceCube collaborations that authors be listed in alphabetical order. A full publication list is available at the end of the CV and at my ORCID or INSPIRE-HEP pages.

12. "Search for Extremely High Energy Neutrinos with IceCube"
M. Meier, **B. A. Clark**, for the IceCube Collaboration
Proc. 38th International Cosmic Ray Conference PoS (ICRC2023)1149. [arXiv:2308.07656]

11. "A low-threshold ultrahigh-energy neutrino search with the Askaryan Radio Array"
P. Allison *et al.* for the ARA Collaboration (incl. **B. A. Clark**)
Physical Review D 105, 122006 (2022). [arXiv:2202.07080]

10. "toise: a framework to describe the performance of high-energy neutrino detectors"
J. van Santen, **B. A. Clark**, R. Halliday, S. Hallman, A. Nelles
JINST 17 (2022) T08009. [arXiv:2202.11120]

9. "Simulation and Sensitivity for a phased IceCube-Gen2 deployment"
**B. A. Clark**, R. Halliday for the IceCube-Gen2 Collaboration
Proc. 37th International Cosmic Ray Conference PoS (ICRC2021)1186. [arXiv:2107.08500]

8. "Sensitivity Studies for the IceCube-Gen2 radio array"
S. Hallmann, **B. A. Clark**, C. Glaser, D. Smith for the IceCube-Gen2 Collaboration
Proc. 37th International Cosmic Ray Conference PoS (ICRC2021)1183. [arXiv:2107.08910]

7. "The IceCube-Gen2 Neutrino Observatory"
**B. A. Clark** for the IceCube-Gen2 Collaboration
JINST 16 (2021) C100O7, Proc. 9th Very Large Volume Neutrino Telescope Workshop (VLVnT-2021). [arXiv:2108.05292]

6. "Constraints on the diffuse flux of ultrahigh energy neutrinos from four years of Askaryan Radio Array Data in two stations"
P. Allison *et al.* for the ARA Collaboration (incl. **B. A. Clark** as corresponding author)
Physical Review D 102, 043021 (2020). [arXiv:1912.00987]

5. "Long-baseline horizontal radio-frequency transmission through polar ice"
P. Allison *et al.* for the ARA Collaboration (incl. **B. A. Clark**)
JCAP Vol 2020 No 12 Pg 009. [arXiv:1908.10689]

4. "NuRadioMC: Simulating the radio emission of neutrinos from interaction to detector"
C. Glaser *et al.* (incl. **B. A. Clark**)
European Physical Journal C 80, 77 (2020). [arXiv:1906.01670]

3. "Design and Performance of an Interferometric Trigger Array for Radio Detection of High-Energy Neutrinos"
P. Allison *et al.* for the ARA Collaboration (incl. **B. A. Clark**)
Nuclear Instruments and Methods A 930, 112-125 (2019). [arXiv:1809.04573]

2. "Observation of Reconstructable Radio Emission Coincident with an X-Class Solar Flare in the Askaryan Radio Array Prototype Station."
P. Allison *et al.* for the ARA Collaboration (incl. **B. A. Clark** as corresponding author)
Submitted to Astroparticle Physics. [arXiv:1807.03335]

1. "Analyzing the Data from X-ray Polarimeters with Stokes Parameters."
F. Kislat, **B. Clark**, M. Bielicke, H. Krawczynski.
Astroparticle Physics 68, 45-51 (2015). [arXiv:1409.6214]

## SCIENTIFIC TALKS & POSTERS

### Invited Talks

11. Physics Colloquium, University of Virginia, Charlottesville VA 2023/12/01
10. Seminar, Yale University Wright Lab, New Haven CT 2023/05/04
9. Seminar, IIHE at VUB/ULB, Brussels BE 2022/10/14
8. Plenary, 15th Intnl. Conf. on Particle Phys and Cosmology (PPC), St. Louis MO 2022/06/09
7. HEP Seminar, Univ. of Maryland, College Park MD 2022/02/23
6. Physics Colloquium, Drexel University, Philadelphia PA 2022/02/17
5. Physics & Astronomy Colloquium, Univ. of Delaware, Newark DE 2022/02/09
4. Physics & Astronomy Colloquium, Univ. of Kansas, Lawrence KS 2021/11/22
3. Plenary, Very Large Volume Neutrino Telescopes 2021 2021/05/19
2. Astronomy Seminar, Michigan State Univ., East Lansing MI 2019/10/23
1. Physics Colloquium, College of Wooster, Wooster OH 2016/10/04

### Contributed Talks and Posters

18. Snowmass 2021 Community Summer Study, Seattle, WA 2022/07/19
17. APS April Meeting 2022, New York NY 2022/04/12
16. 20th Annual AAPF Symposium 2022/01/10
15. International Cosmic Ray Conference 2021, Berlin Germany 2021/07/20
14. APS April Meeting 2021 2021/04/19
13. 19th Annual AAPF Symposium 2021/02/09
12. NEUTRINO 2020, Chicago IL 2020/06/21
11. 18th Annual AAPF Symposium at the 235th AAS Meeting, Honolulu HI 2020/01/04
10. OSU CCAPP Seminar, Columbus OH. 2019/07/16
9. APS April Meeting 2019, Denver CO 2019/04/15
8. Ohio Section of the APS Fall 2018 Meeting, Toledo OH 2018/09/29
7. OSU CCAPP Seminar, Columbus OH 2018/05/22
6. APS April Meeting 2018, Columbus OH 2018/04/16
5. TeV Particle Astrophysics, Columbus OH 2017/08/11
4. APS April Meeting 2017, Washington DC 2017/01/31
3. Computing in High Energy Astropart. Phys. Research 2016, Columbus OH. 2016/05/26
2. OSU Physics Summer Seminar Series, Columbus OH 2016/04/23
1. Ohio Section of the APS Spring 2016 Meeting, Dayton OH 2016/04/09

## LEADERSHIP and SERVICE

### Scientific Leadership

| | |
|---|---|
| IceCube Collaboration Diffuse Working Group Convener | 2022-Present |
| Early Career Scientists Representative, the IceCube Collaboration | January 2021-January 2023 |
| ARA Analysis Coordinator | 2020-2023 |
| ARA Operations Coordinator | 2018-2019 |

### Professional Activities

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| Reviewer in a NSF Astronomy and Asrophysics Panel | 2024-Present |
| Reviewer in a NASA Peer Review Panel | 2021-2022 |
| Peer Reviewer, Journal of Astroparticle Physics | 2022-Present |
| Peer Reviewer, Journal of Instrumentation | 2021-Present |

### University and Departmental Service

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|---|---|
| Co-Chair, UMD Physics Departmental Colloquium Committee | 2023-Present |
| Member, UMD Physics Departmental Laboratory Committee | 2023-Present |
| Member, UMD Physics Departmental Admissions Committee | 2023-Present |
| Member, OSU Physics Climate and Diversity Committee | January 2017-May 2018 |
| Officer, OSU Physics Graduate Student Council | October 2014-May 2017 |

## MENTORSHIP and ADVISING

### Postdoctoral Researchers

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|---|---|
| Steve Sclafani | 2023-Present |

### PhD Research Students

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| Aishwarya Vijai | 2022-Present |

### Undergraduate Research Students

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| Zoe Brunton | 2024-Present |
| Rohan Panchwagh | 2023-Present |

### Committee Membership

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| Eli Mazrachi (PhD) | March 2024 |
| Lucas Smith (PhD) | 2023-Present |
| Elijah Willox (Phd) | April 2024 |

## TEACHING

**The University of Maryland**, College Park, MD

*Physics 276: Experimental Physics II* (Spring 2023, Spring 2024)

**The Ohio State University**, Columbus, OH

*Astronomy 1143: Stars, Galaxies, and Cosmology* (Spring 2016)
*Physics 1251: E&M, Optics, and Quantum Mechanics* (Fall 2015)

## OUTREACH

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| Talk at UMD PHYS 170 "Professional Physics" Seminar | September 2023 |
| Laboratory Tour for UMD Departmental "Toolkit for Success" Program | July 2023 |
| Outreach at Maryland Day | April 2023 |
| Talk at UMD Graduate Survey Seminar | March 2023 |
| Talk, MSU Science Festival | April 2021 |
| Talk, Making Space for All | June 2020 |
| Talk, Astronomy on Tap Lansing | October 2019, August 2021 |
| Coordinator for ASPIRE Workshop for High School Women, OSU | July 2015-June 2019 |
| Volunteer Judge, Ohio State Science Day | 2015-2019 |
| Talk, Columbus Science Pub | May 2018 |
| Talk, The Wellington School, Columbus, OH | April 2018 |
| Volunteer Judge, OSU Denman Undergraduate Research Forum | 2016 |

**FULL PUBLICATION LIST**


140. R. Abbasi et al. "Citizen Science for IceCube: Name that Neutrino". In: (Jan. 2024). arXiv: 2401.11994 [astro-ph.HE].

139. R. Abbasi et al. "Search for 10–1,000 GeV neutrinos from Gamma Ray Bursts with IceCube". In: (Dec. 2023). arXiv: 2312.11515 [astro-ph.HE].

138. R. Abbasi et al. "All-Sky Search for Transient Astrophysical Neutrino Emission with 10 Years of IceCube Cascade Events". In: (Dec. 2023). arXiv: 2312.05362 [astro-ph.HE].

137. N. Kurahashi Neilson et al. "Highlights from the IceCube Neutrino Observatory". In: *PoS* ICRC2023 (2024), p. 017. DOI: 10.22323/1.444.0017. arXiv: 2310.12840 [astro-ph.HE].

136. R. Abbasi et al. "Search for Continuous and Transient Neutrino Emission Associated with IceCube's Highest-Energy Tracks: An 11-Year Analysis". In: (Sept. 2023). arXiv: 2309.12130 [astro-ph.HE].

135. R. Abbasi et al. "Search for Galactic Core-collapse Supernovae in a Decade of Data Taken with the IceCube Neutrino Observatory". In: *Astrophys. J.* 961.1 (2024), p. 84. DOI: 10.3847/1538-4357/ad07d1. arXiv: 2308.01172 [astro-ph.HE].

134. R. Abbasi et al. "Sensitivity of the IceCube-Gen2 Surface Array for Cosmic-Ray Anisotropy Studies". In: *PoS* ICRC2023 (2023), p. 354. DOI: 10.22323/1.444.0354. arXiv: 2307.14655 [astro-ph.HE].

133. M. Dittmer et al. "Performance studies on new 4" photomultiplier types intended for IceCube-Gen2 optical modules". In: *PoS* ICRC2023 (2023), p. 985. DOI: 10.22323/1.444.0985. arXiv: 2307.14589 [astro-ph.IM].

132. T. Glüsenkamp et al. "VAE-based latent-space classification of RNO-G data". In: *PoS* ICRC2023 (2023), p. 1056. DOI: 10.22323/1.444.1056. arXiv: 2309.16401 [astro-ph.HE].

131. R. Abbasi et al. "Searching for High-energy Neutrino Emission from Seyfert Galaxies in the Northern Sky with IceCube". In: *PoS* ICRC2023 (2023), p. 1052. DOI: 10.22323/1.444.1052. arXiv: 2308.00024 [astro-ph.HE].

130. A. Coleman et al. "Enhancing the Sensitivity of RNO-G Using a Machine-learning Based Trigger". In: *PoS* ICRC2023 (2023), p. 1100. DOI: 10.22323/1.444.1100.

129. E. Oberla et al. "Low-Power Radiofrequency Systems for the RNO-G Project". In: *PoS* ICRC2023 (2023), p. 1171. DOI: 10.22323/1.444.1171.

128. R. Abbasi et al. "Searching for Decoherence from Quantum Gravity at the IceCube South Pole Neutrino Observatory". In: (July 2023). arXiv: 2308.00105 [hep-ex].

127. M. S. Muzio et al. "Multimessenger Potential of the Radio Neutrino Observatory in Greenland". In: *PoS* ICRC2023 (2023), p. 1485. DOI: 10.22323/1.444.1485. arXiv: 2308.07224 [astro-ph.HE].

126. R. Abbasi et al. "The IceCube Collaboration – Contributions to the 38th International Cosmic Ray Conference (ICRC2023)". In: *38th International Cosmic Ray Conference*. July 2023. arXiv: 2307.13047 [astro-ph.HE].

125. R. Abbasi et al. "Search for Extended Sources of Neutrino Emission in the Galactic Plane with IceCube". In: *Astrophys. J.* 956.1 (2023), p. 20. DOI: 10.3847/1538-4357/acf713. arXiv: 2307.07576 [astro-ph.HE].

124. R. Abbasi et al. "Observation of high-energy neutrinos from the Galactic plane". In: *Science* 380.6652 (2023), adc9818. DOI: 10.1126/science.adc9818. arXiv: 2307.04427 [astro-ph.HE].

123. J. Henrichs et al. "Searching for air showers with RNO-G". In: *PoS* ARENA2022 (2023), p. 007. DOI: 10.22323/1.424.0007.

122. J. A. Aguilar et al. "The Radio Neutrino Observatory Greenland RNO-G: Status update". In: *PoS* ARENA2022 (2023), p. 005. DOI: 10.22323/1.424.0005.

121. R. Abbasi et al. "Search for Correlations of High-energy Neutrinos Detected in IceCube with Radio-bright AGN and Gamma-Ray Emission from Blazars". In: *Astrophys. J.* 954.1 (2023), p. 75. DOI: 10.3847/1538-4357/acdfcb. arXiv: 2304.12675 [astro-ph.HE].

120. R. Abbasi et al. "Measurement of atmospheric neutrino mixing with improved IceCube DeepCore calibration and data processing". In: *Phys. Rev. D* 108.1 (2023), p. 012014. DOI: 10.1103/PhysRevD.108.012014. arXiv: 2304.12236 [hep-ex].

119. R. Abbasi et al. "IceCat-1: The IceCube Event Catalog of Alert Tracks". In: *Astrophys. J. Suppl.* 269.1 (2023), p. 25. DOI: 10.3847/1538-4365/acfa95. arXiv: 2304.01174 [astro-ph.HE].

118. R. Abbasi et al. "A Search for IceCube Sub-TeV Neutrinos Correlated with Gravitational-wave Events Detected By LIGO/Virgo". In: *Astrophys. J.* 959.2 (2023), p. 96. DOI: 10.3847/1538-4357/aceefc. arXiv: 2303.15970 [astro-ph.HE].

117. R. Abbasi et al. "Search for neutrino lines from dark matter annihilation and decay with IceCube". In: *Phys. Rev. D* 108.10 (2023), p. 102004. DOI: 10.1103/PhysRevD.108.102004. arXiv: 2303.13663 [astro-ph.HE].

116. R. Abbasi et al. "Observation of seasonal variations of the flux of high-energy atmospheric neutrinos with IceCube". In: *Eur. Phys. J. C* 83.9 (2023), p. 777. DOI: 10.1140/epjc/s10052-023-11679-5. arXiv: 2303.04682 [astro-ph.HE].

115. R. Abbasi et al. "Constraining High-energy Neutrino Emission from Supernovae with IceCube". In: *Astrophys. J. Lett.* 949.1 (2023), p. L12. DOI: 10.3847/2041-8213/acd2c9. arXiv: 2303.03316 [astro-ph.HE].

114. J. A. Aguilar et al. "Triboelectric backgrounds to radio-based polar ultra-high energy neutrino (UHEN) experiments". In: *Astropart. Phys.* 145 (2023), p. 102790. DOI: 10.1016/j.astropartphys.2022.102790.

113. L. Pyras et al. "The Radio Neutrino Observatory Greenland: Status Update and Prospect for Air Showers". In: *PoS* ECRS (2023), p. 088. DOI: 10.22323/1.423.0088.

112. R. Abbasi et al. "Limits on Neutrino Emission from GRB 221009A from MeV to PeV Using the IceCube Neutrino Observatory". In: *Astrophys. J. Lett.* 946.1 (2023), p. L26. DOI: 10.3847/2041-8213/acc077. arXiv: 2302.05459 [astro-ph.HE].

111. R. Abbasi et al. "D-Egg: a dual PMT optical module for IceCube". In: *JINST* 18.04 (2023), P04014. DOI: 10.1088/1748-0221/18/04/P04014. arXiv: 2212.14526 [astro-ph.IM].

110. R. Abbasi et al. "A Search for Coincident Neutrino Emission from Fast Radio Bursts with Seven Years of IceCube Cascade Events". In: *Astrophys. J.* 946.2 (2023), p. 80. DOI: 10.3847/1538-4357/acbea0. arXiv: 2212.06702 [astro-ph.HE].

109. R. Abbasi et al. "Search for sub-TeV Neutrino Emission from Novae with IceCube-DeepCore". In: *Astrophys. J.* 953.2 (2023), p. 160. DOI: 10.3847/1538-4357/acdc1b. arXiv: 2212.06810 [astro-ph.HE].

108. R. Abbasi et al. "Searches for Neutrinos from Large High Altitude Air Shower Observatory Ultra-high-energy $\gamma$-Ray Sources Using the IceCube Neutrino Observatory". In: *Astrophys. J. Lett.* 945.1 (2023), p. L8. DOI: 10.3847/2041-8213/acb933. arXiv: 2211.14184 [astro-ph.HE].

107. R. Abbasi et al. "Evidence for neutrino emission from the nearby active galaxy NGC 1068". In: *Science* 378.6619 (2022), pp. 538–543. DOI: 10.1126/science.abg3395. arXiv: 2211.09972 [astro-ph.HE].

106. R. Abbasi et al. "Constraints on Populations of Neutrino Sources from Searches in the Directions of IceCube Neutrino Alerts". In: *Astrophys. J.* 951.1 (2023), p. 45. DOI: 10.3847/1538-4357/acd2ca. arXiv: 2210.04930 [astro-ph.HE].

105. R. Abbasi et al. "Graph Neural Networks for low-energy event classification & reconstruction in IceCube". In: *JINST* 17.11 (2022), P11003. DOI: 10.1088/1748-0221/17/11/P11003. arXiv: 2209.03042 [hep-ex].

104. R. Abbasi et al. "IceCube Search for Neutrinos Coincident with Gravitational Wave Events from LIGO/Virgo Run O3". In: *Astrophys. J.* 944.1 (2023), p. 80. DOI: 10.3847/1538-4357/aca5fc. arXiv: 2208.09532 [astro-ph.HE].

103. R. Abbasi et al. "Search for Astrophysical Neutrinos from 1FLE Blazars with IceCube". In: *Astrophys. J.* 938.1 (2022), p. 38. DOI: 10.3847/1538-4357/ac8de4. arXiv: 2207.04946 [astro-ph.HE].

102. R. Abbasi et al. "Searching for High-energy Neutrino Emission from Galaxy Clusters with IceCube". In: *Astrophys. J. Lett.* 938.2 (2022), p. L11. DOI: 10.3847/2041-8213/ac966b. arXiv: 2206.02054 [astro-ph.HE].

101. R. Abbasi et al. "Searches for connections between dark matter and high-energy neutrinos with IceCube". In: *JCAP* 10 (2023), p. 003. DOI: 10.1088/1475-7516/2023/10/003. arXiv: 2205.12950 [hep-ex].

100. R. Abbasi et al. "Searches for Neutrinos from Gamma-Ray Bursts Using the IceCube Neutrino Observatory". In: *Astrophys. J.* 939.2 (2022), p. 116. DOI: 10.3847/1538-4357/ac9785. arXiv: 2205.11410 [astro-ph.HE].

99. R. Abbasi et al. "Framework and tools for the simulation and analysis of the radio emission from air showers at IceCube". In: *JINST* 17.06 (2022), P06026. DOI: 10.1088/1748-0221/17/06/P06026. arXiv: 2205.02258 [astro-ph.HE].

98. R. Abbasi et al. "Search for Unstable Sterile Neutrinos with the IceCube Neutrino Observatory". In: *Phys. Rev. Lett.* 129.15 (2022), p. 151801. DOI: 10.1103/PhysRevLett.129.151801. arXiv: 2204.00612 [hep-ex].

97. M. Ackermann et al. "High-energy and ultra-high-energy neutrinos: A Snowmass white paper". In: *JHEAp* 36 (2022), pp. 55–110. DOI: 10.1016/j.jheap.2022.08.001. arXiv: 2203.08096 [hep-ph].

96. R. Abbasi et al. "Low energy event reconstruction in IceCube DeepCore". In: *Eur. Phys. J. C* 82.9 (2022), p. 807. DOI: 10.1140/epjc/s10052-022-10721-2. arXiv: 2203.02303 [hep-ex].

95. R. Abbasi et al. "Search for High-energy Neutrino Emission from Galactic X-Ray Binaries with IceCube". In: *Astrophys. J. Lett.* 930.2 (2022), p. L24. DOI: 10.3847/2041-8213/ac67d8. arXiv: 2202.11722 [astro-ph.HE].

94. J. van Santen, B. A. Clark, R. Halliday, S. Hallmann, and A. Nelles. "toise: a framework to describe the performance of high-energy neutrino detectors". In: *JINST* 17.08 (2022), T08009. DOI: 10.1088/1748-0221/17/08/T08009. arXiv: 2202.11120 [astro-ph.IM].

93. P. Allison et al. "Low-threshold ultrahigh-energy neutrino search with the Askaryan Radio Array". In: *Phys. Rev. D* 105.12 (2022), p. 122006. DOI: 10.1103/PhysRevD.105.122006. arXiv: 2202.07080 [astro-ph.HE].

92. R. Abbasi et al. "Density of GeV muons in air showers measured with IceTop". In: *Phys. Rev. D* 106.3 (2022), p. 032010. DOI: 10.1103/PhysRevD.106.032010. arXiv: 2201.12635 [hep-ex].

91. J. A. Aguilar et al. "In situ, broadband measurement of the radio frequency attenuation length at Summit Station, Greenland". In: (Jan. 2022). DOI: 10.1017/jog.2022.40. arXiv: 2201.07846 [astro-ph.IM].

90. A. Albert et al. "Search for Spatial Correlations of Neutrinos with Ultra-high-energy Cosmic Rays". In: *Astrophys. J.* 934.2 (2022), p. 164. DOI: 10.3847/1538-4357/ac6def. arXiv: 2201.07313 [astro-ph.HE].

89. R. Abbasi et al. "Strong Constraints on Neutrino Nonstandard Interactions from TeV-Scale $\nu_u$ Disappearance at IceCube". In: *Phys. Rev. Lett.* 129.1 (2022), p. 011804. DOI: 10.1103/PhysRevLett.129.011804. arXiv: 2201.03566 [hep-ex].

88. R. Abbasi et al. "Improved Characterization of the Astrophysical Muon–neutrino Flux with 9.5 Years of IceCube Data". In: *Astrophys. J.* 928.1 (2022), p. 50. DOI: 10.3847/1538-4357/ac4d29. arXiv: 2111.10299 [astro-ph.HE].

87. R. Abbasi et al. "Search for neutrino emission from cores of active galactic nuclei". In: *Phys. Rev. D* 106.2 (2022), p. 022005. DOI: 10.1103/PhysRevD.106.022005. arXiv: 2111.10169 [astro-ph.HE].

86. R. Abbasi et al. "Search for GeV-scale dark matter annihilation in the Sun with IceCube DeepCore". In: *Phys. Rev. D* 105.6 (2022), p. 062004. DOI: 10.1103/PhysRevD.105.062004. arXiv: 2111.09970 [astro-ph.HE].

85. R. Abbasi et al. "Search for quantum gravity using astrophysical neutrino flavour with IceCube". In: *Nature Phys.* 18.11 (2022), pp. 1287–1292. DOI: 10.1038/s41567-022-01762-1. arXiv: 2111.04654 [hep-ex].

84. R. Abbasi et al. "Search for Relativistic Magnetic Monopoles with Eight Years of IceCube Data". In: *Phys. Rev. Lett.* 128.5 (2022), p. 051101. DOI: 10.1103/PhysRevLett.128.051101. arXiv: 2109.13719 [astro-ph.HE].

83. R. Abbasi et al. "Search for Multi-flare Neutrino Emissions in 10 yr of IceCube Data from a Catalog of Sources". In: *Astrophys. J. Lett.* 920.2 (2021), p. L45. DOI: 10.3847/2041-8213/ac2c7b. arXiv: 2109.05818 [astro-ph.HE].

82. V. A. Acciari et al. "Searching for VHE gamma-ray emission associated with IceCube neutrino alerts using FACT, H.E.S.S., MAGIC, and VERITAS". In: *PoS* ICRC2021 (2021), p. 960. DOI: 10.22323/1.395.0960. arXiv: 2109.04350 [astro-ph.HE].

81. B. Clark. "The IceCube-Gen2 Neutrino Observatory". In: *JINST* 16.10 (2021), p. C10007. DOI: 10.1088/1748-0221/16/10/C10007. arXiv: 2108.05292 [astro-ph.HE].

80. H. Ayala et al. "Multimessenger NuEM Alerts with AMON". In: *PoS* ICRC2021 (2021), p. 958. DOI: 10.22323/1.395.0958. arXiv: 2108.04920 [astro-ph.HE].

79. R. Abbasi et al. "Simulation study for the future IceCube-Gen2 surface array". In: *PoS* ICRC2021 (2021), p. 411. DOI: 10.22323/1.395.0411. arXiv: 2108.04307 [astro-ph.HE].

78. R. Abbasi et al. "Searching for neutrino transients below 1 TeV with IceCube". In: *PoS* ICRC2021 (2021), p. 1131. DOI: 10.22323/1.395.1131. arXiv: 2108.01530 [astro-ph.HE].

77. F. G. Schroeder et al. "The Surface Array planned for IceCube-Gen2". In: *PoS* ICRC2021 (2021), p. 407. DOI: 10.22323/1.395.0407. arXiv: 2108.00364 [astro-ph.HE].

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