

VITA

Dr. BHASKAR DUTTA

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PREVIOUS POSITIONS:

- Associate Professor (2005-2009 (August)), Department of Physics and Astronomy, Texas A&M University.
- Assistant Professor (2002-2005 (July)), University of Regina, Regina, SK S4S 0A2, Canada.
- Post-Doctoral Research Associate (1998-2002), Department of Physics, Texas A&M University.
- Post-Doctoral Research Associate (1995-1998), Institute of Theoretical Sciences, University of Oregon, Eugene, OR 97403.

EDUCATION:

- Ph.D (Physics) Oklahoma State University, (Fall, 1990-Summer, 1995) .
- M.Sc (Physics) University of Calcutta, India, (1988-1990) (was placed in First class).
- B.Sc (Physics, Mathematics) Presidency College, Calcutta University, (1984-1987) (was placed in First class).

SPECIAL AWARDS AND HONORS:

- American Physical Society Fellow, 2020
- Holder of Mitchell-Heep Chair in High Energy Physics since 2019
- Distinguished Alumni Award, Oklahoma State University, 2017.
- Association of Former Students College-Level Distinguished Achievement Award in Teaching, 2012
- Selected an outstanding junior scientist in Canada by the Partnership Group for Science and Engineering. Attended the symposium “Leaders of Tomorrow” in Canadian Parliament, Ottawa (Nov., 2004).
- Best Research Assistant (1993, OSU).
- National Merit Scholarship (B.Sc).
- National Merit Scholarship (High School).

REFEREE:

- National Science Foundation Grant proposals and panelist of the High Energy theory funding review committee.
- Department of Energy Grant Proposals and panelist of the High Energy theory funding review committee.
- Physics Review D and Physics Review Letters.
- Physics Letters B.
- JHEP
- JCAP
- Reviewer of European theory proposals.
- Associate Editor, Frontiers journal High Energy and Astro-particle Physics
- Editor, Letters in High Energy Physics

RESEARCH PUBLICATIONS CITATION STATISTICS:

223 papers in major journals with ~ 12000 citations, h-index 61

(<https://scholar.google.com/citations?user=dGJ5LvEAAAAJ&hl=en&authuser=1>)

GRANTS :

- Department of Energy (2007-2010), (2010-2013), (2013-2016), (2016-2017), (2017-2020), (2020-2023), (2023-2026).
- TAMU-LANL collaborative funding (2021-2024).
- College of Science, Strategic Transformative Research Program Funds 2018-2019.
- Fermilab neutrino program funding, 2019.
- NSF funding to organize workshop (2015,2013)
- DOE funding to organize workshop (2019, 2015,2012)
- Conacyt funding to organize PPC in Mexico (2014)
- IRTAG travel grant (TAMU).
- NSF-Research Experiences for Undergraduates (Co-PI)(2007-08).
- Department of Education: Graduate Assistance in the Areas of National Need (Co-PI)(2007-2010)
- Natural Sciences and Engineering Research Council of Canada (2003-2005).

INVITED CONTRIBUTIONS:

- Invited contribution Snowmass white paper on dark sector studies with neutrino beams, 2022
- Invited contribution Snowmass white paper on light sterile neutrino searches and phenomenology, 2022

- Invited contribution Snowmass white paper on coherent neutrino-nucleus scattering, 2022
- Invited contribution Snowmass white paper on neutrino self interaction, 2022
- Invited contribution Snowmass white paper on Forward Physics Facility, 2022
- Invited to contribute to Neutrino Non-Standard Interactions: A Status Report, 2019
- Invited to contribute to the Proceedings of The Magnificent CE ν NS Workshop 2018
- Invited to write a review article on neutrino physics and dark matter detector in Annual Review of Nuclear and Particle Science, 2019
- Invited to contribute a review on SUSY at the LHC to LHCP proceeding in PoS LHCP2018 (2018) 160.
- Invited to contributions to SILAFAE 2016 proceeding (XI Latin American Symposium of High Energy Physics)
- Invited to edit the conference proceeding: “Workshop on Dark Matter, Unification and Neutrino Physics (CETUP* 2015)
- Invited to contribute to the Intensity Frontier Documents on proton decay, lepton flavor violation (2012);
- Invited contributions for Snowmass white paper (2013) in dark matter, collider.
- Invited to edit the conference proceeding: Workshop on Dark Matter, Neutrino Physics and Astrophysics CETUP* 2013: 7th International Conference on Interconnection between Particle Physics and Cosmology (PPC 2013)
- Invited to edit the conference proceeding: “Workshop on Dark Matter, Unification and Neutrino Physics (CETUP* 2012)”.
- Invited to contribute to the Intensity Frontier Document on proton decay, lepton flavor violation,
- Invited to contribute to the summary document Pre-SUSY 2009: Beyond the Standard Model Physics and LHC Signatures (BSM-LHC), Boston, Massachusetts,
- Invited to contribute “SUSY at the LHC” to the Julius Wess memorial volume, to be published by EPJC in 2008.
- Invited to contribute to the Supersymmetry Parameter Analysis project (Chairpersons: J. Kalinowski, H.-U. Martyn).
- Invited to contribute in recent APS Neutrino Study (Study Organizers: Boris Kayser and Stuart Freedman).
- Invited to contribute to white paper for Linear Collider.
- Invited to contribute to report of the SUGRA working group for RUN II of the Tevatron.
- Invited to contribute to report on low scale and gauge mediated supersymmetry breaking at the Fermilab Tevatron RUN II.

- Invited to contribute to report of the beyond the MSSM subgroup for the Tevatron RUN II SUSY / Higgs workshop.

ADVISING:

Post Doctoral:

1. Dr. Doojin Kim (2021-)
2. Dr. Mohammad Abdullah (2017-2020, faculty, Kuwait University)
3. Prof. Peisi Huang (2016-2017, current position: Assistant Professor, University of Nebraska)
4. Prof. Yu Gao (2013-2016, current position: Assistant Professor, IHEP, Beijing, China)
5. Prof. Kuver Sinha (2010-2013, current position : Assistant Professor, University of Oklahoma),
6. Prof. Yukihiro Mimura (2005-2009, current position: Research Prof., Dept. of Phys., National Taiwan University);
7. Prof. James Dent (2005-2006, current position: Assistant Professor, Dept. of Phys., Sam Houston State University),
8. Prof. Jason Kumar (2005-2007, current position: Associate Professor, Dept. of Phys., University of Hawaii)

Doctoral: Supervisor (chair of the Ph.D. committee):

1. Wei-Chi Huang(current)
2. Ankur Verma (current)
3. Aparajitha Karthikeyan(current)
4. Iain Bissett (current)
5. Adrian Thomson (graduated in 2023 summer), post-doctoral fellow at Northwestern University, Chicago, IL
6. Sumit Ghosh (graduated in 2021 summer), post-doctoral fellow at KIAS
7. Shu Liao (graduated in 2020 spring), Research Scientist at Amazon
8. Dr. Steven Clark (graduated in 2019 summer, Position from Fall 2019: Post-doctoral fellow: Brown University)
9. Dr. Esteban Jimenez (graduated 2018, current position: Assistant Professor, Department of Physics, University of Costa Rica)
10. Dr. Sean Wu (graduated 2017, current position: Visiting Assistant Professor, Department of Physics, University of Cincinnati)
11. Dr. Tathagata Ghosh (graduated 2016, current position: Professor, Harish Chandra Research Institute, Allahabad, India)

12. Dr. Kechen Wang (graduated 2014, current position: Professor, Kechen Wang (Wuhan U. of Tech., China)
13. Dr. Sean Downes (graduated 2013, current position: Post-doctoral fellow, Dept. of physics, University of Taiwan),
14. Dr. Sheldon Campbel (graduated, 2012, current position: Lead Data Scientist at Sobeys, Toronto, Ontario, Canada),
15. Dr. Abram Krislock (graduated, 2011, current position: Post-doctoral fellow, Dept. of physics, University of Oslo, Norway)

Undergraduate:

1. P. Simeon (Goldwater scholar, graduated, 2009, current position: graduate student, Dept. of physics, Stanford University),
2. Phuongmai Truong (graduated, 2011, current position: graduate student, Dept. of physics, University of California, Berkeley),
3. Daniel Freeman (Best Thesis award, graduated, 2012, current position: graduate student, Dept. of physics, University of California, Berkeley),
4. Chris Akers (graduated, 2013, current position: graduate student, Dept. of physics, University of California, Berkeley)

SPEAKER AT MAJOR CONFERENCES, UNIVERSITIES AND SUMMER SCHOOL

1. Invited talk at ACE workshop at Fermilab, Il (June, 2023)
2. Invited talk at Physics Opportunities at Beam Dump Facility in PIP-II and Beyond, Fermilab, Il (May, 2023)
3. Invited seminar at Maojora-Raychaudhri seminar series, organized by Italy and India (Jan, 27, 2023)
4. Invited talk at Nu Tools for BSM at Neutrino Beam Experiments workshop, Pitt-PAC, University of Pittsburgh (2022)
5. Invited talk at The First International Conference on Axion Physics and Experiment (Axion 2022), Academia Sinica, China (2022)
6. Invited talk at International workshop on high energy physics and Cosmology, Xian, China(2022)
7. Invited talk at Theoretical Astroparticle and Cosmology Symposium in Texas, SMU, (2022)
8. Invited talk at PPC, Washington University, St. Louis, Missouri (2022)
9. invited science talk at Oakridge National Laboratory (2021)
10. invited talk at SUSY 2021, Beijing, China (2021)
11. Invited talk at PPC, University of Oklahoma, Norman, (2021)
12. Seminar at University of New Mexico (2021)

13. Colloquium at Colorado State University (2020).
14. Seminar at KIAS, Korea (2020).
15. Talk at Snowmass neutrino workshop (2020).
16. Seminar at TAMU-LANL(2020).
17. Talk at Rice University, (CAPP, 2019).
18. Talk at 2nd Target Station FPSTS, Oak Ridge, TN (July, 2019).
19. Talk at Opportunities at future collider, Madrid, Spain, (June, 2019).
20. Talk at ν – electron scattering workshop–University of Massachusetts, (April 2019).
21. Talk at NTN workshop, Washington Univ., St. Louis, (May, 2019).
22. Seminar at UC Irvine, Californina, (February, 2019).
23. Semir at IACS, Kolkata, India (December, 2018).
24. Talk at CE ν NS, University of Chicago, (November, 2018)
25. Talk at SUSY 2018, Barcelona, Spain (July, 2018)
26. Talk at Summer Workshop in Particle Physics, Santa Fe, NM (July, 2018)
27. Talk at LHCP, Bologona, Italy (June, 2018)
28. Seminar at Syracuse University (March, 2018)
29. Seminar at IACS, Kolkata, India (December, 2017)
30. Colloquium at Texas Tech University (October, 2017)
31. Colloquium and seminar at OSU, Stillwater (September, 2017)
32. Talk at WIN 2017, Irvine, CA, 2017
33. Talk at International Summer School, Bogota, Colombia, May, 2017
34. Talk at South American Dark Matter Workshop, ICTP-SAIFR, São Paulo, Brazil, May, 2017
35. Talk at Miami, 2016 (December, 2016)
36. Talk at the Latin American Symposium on High Energy Physics (SILAFAE) —Guatemala (November, 2016)
37. Talk at LHC Run 2—Santa Fe (July, 2016)
38. Talk at Sixth Workshop on Theory, Phenomenology and Experiments in Flavour Physics - FPCapri2016 (June, 2016)
39. Colloquium at University of Houston-Clear Lake (February, 2016)
40. Colloquium at University of Delaware (October, 2015)

41. Seminar at University of Delaware (October, 2015)
42. Talk at NEW TECHNOLOGIES for DISCOVERY Organized by the Coordinating Panel for Advanced Detectors of the DPF of the APS (October, 2015)
43. Talk at DM workshop, Madrid (May, 2015)
44. Talk at Cambridge-Mitchell workshop (April, 2015)
45. Talk at University of New Mexico (March 2015)
46. Talk at University of Texas (February, 2015)
47. Talk at University of Louisiana (February, 2015)
48. Talk at IACS, Kolkata (December, 2014)
49. Talk at XVI Mexican School of Particles and Fields, Mexico (December, 2014)
50. Talk at Hidden Dark Conference 2014, Michigan (November, 2014)
51. Talk at Multidark Conference 2014, Daejeon, Korea (October, 2014)
52. Talk at 100 TeV Collider Workshop 2014, Fermilab (August, 2014)
53. Talk at String Phenomenology 2014, ICTP, Trieste (July, 2014)
54. Talk at LHC After the Higgs, Santa Fe, New Mexico (July, 2014)
55. Talk at PPC, Mexico (June, 2014)
56. Talk at Summer School, Los Andes University, Bogota, Colombia (May, 2014)
57. Talk at Miami 2013, Florida(December, 2013)
58. Talk at CosPa 2013(November, 2013)
59. DM Talk at Aspen summer workshop 2013(September, 2013)
60. Talk at Aspen summer workshop 2013(september, 2013)
61. Talk at CETUP 2013 (July, 2013)
62. Talk at LHCP 2013(May, 2013)
63. Talk at BNL-Snowmass 2013(April, 2013)
64. Talk at Aspen Winter workshop 2013(January, 2013)
65. Talk at Miami 2012, Florida(December, 2012)
66. Talk at PPC, Seoul, Korea (November, 2012)
67. Talk at CETUP* workshop, South Dakota (July, 2012)
68. Talk at TCC Workshop, Austin (May, 2012)
69. Talk at Sam Houston State University (April, 2012)

70. Talk at University of New Mexico (March, 2012)
71. Talk at Bethe Forum, Germany (November, 2011)
72. Talk at Mini-Workshop on Dark Matter (May, 2011)
73. Colloquium at Baylor University (September, 2011)
74. Talk at PASCOS, July 2009
75. Talk at TAUP, July 2009
76. Talk at SUSY, June 2009
77. Talk at SUSY-BSM, June 2009
78. Talk at PPC 2009, May 2009
79. Talk at DARK 2009, January 2009
80. Talk at Coral Gables, Florida, December, 2008.
81. Seminar at University of Torino, Italy, 2008.
82. Talk at Cosmo 2008, Madison, Wisconsin.
83. Talk at IDM 2008, Stockholm, Sweden.
84. Seminar speaker at University of Durham, UK, June, 2008.
85. Talk at ICHEP (international Conference on High Energy Physics, 2 talks), 2008.
86. Talk at CDF, Fermilab, April, 2008.
87. Colloquium at Texas Tech University (March, 2008).
88. Seminar at University of New Mexico (March, 2008).
89. Talk at DM 2008, February, UCLA.
90. Talk at Les Rencontres de Physique de La Vallée, La Thuile, Italy 2008, February.
91. Two seminars at the university of Maryland (November, 2007).
92. Talk at B-L violation workshop, LBNL (2007).
93. Talk at SUSY, Karlsruhe, Germany (2007).
94. Talk at Ultra Cold and Cold Neutrons, St Petersburg, Russia (2007).
95. Talk at Dark Side of the Universe, Minnesota (2007).
96. Talk at the Midwest Theory Conference, Kansas (2007).
97. Talk at the DPF'06, Hawaii, US Oct(2006) two talks.
98. Talk at the ICHEP'06, Moscow, Russia July(2006).

99. Talk at the CDMSCE'06, Irvine, June(2006).
100. Talk at the PHENO'06, Wisconsin, May(2006).
101. Seminar and Colloquium Speaker at OSU, April(2006).
102. Talk at the DM'06, (UCLA Symposium), February(2006).
103. Talk at the Coral Gables Conference, Florida, December(2005).
104. Talk at the SUSY'05, Durham, UK, July(2005).
105. Seminar Speaker at UC Riverside, CA, April(2005).
106. Colloquium Speaker at TAMU, Tx, Jan.(2005).
107. Talk at the ILC Workshop, Stanford University, SLAC, Stanford, CA, January(2005).
108. Talk at the DARK, 2004, October(2004).
109. Talk at the PASCOS, 2004 (Boston), August(2004).
110. Talk at the LC Workshop, 2004 (Victoria), July(2004).
111. Talk at the CAP Congress, 2004 (Winnipeg), June(2004).
112. Talk at the Dark Matter 2004 (UCLA Symposium), February(2004).
113. Talk at the Coral Gables Conference, Florida, December(2003).
114. Talk at the 2nd String-phenomenology Conference, Durham, (July'2003).
115. Talk at the LC Workshop, Cornell University, Ithaca, NY, July(2003).
116. Talk at the LC Workshop, Arlington, January(2003).
117. Talk at the Coral Gables Conference, Florida, December(2002).
118. Talk at the Cosmo 02, Chicago, (September'2002).
119. Talk at the 1st String-phenomenology Conference, Oxford, (July'2002).
120. Talk at the University of Regina, Regina, CA (Spring'2002).
121. Talk at the University of Regina, Regina, CA (Spring'2002).
122. Talk at Dark Matter 2002, UCLA, CA, February, 2002.
123. Seminar speaker at the University of Alabama, Tuscaloosa, AL (Spring'2002).
124. Colloquium speaker at the Texas A & M University, College Station, TX (Spring'2002).
125. Talk at the LC Workshop at the University of Chicago, January, 2002.
126. Talk at the Coral Gables at Fort Lauderdale, FL, December, 2001.
127. Talk at EDM 2001 at BNL, NY, May, 2001.

128. Colloquium speaker at the Texas A & M University, College Station, TX (Spring'2001).
129. Seminar speaker at the University of Indiana, Bloomington, IN (Spring'2001).
130. Talk at the Orbis Scientae 2000 at Fourt Lauderdale, Fl, December, 2000.
131. Talk at the DPF 2000 at Columbus, Oh, August, 2000.
132. Talk at the SUSY 99, Fermilab, IL, June, 1999.
133. Talk at the Final RUN II Workshop, Fermilab, IL, November, 1998.
134. Seminar speaker at the Southern Methodist University, Dallas, TX (Fall'98).
135. Seminar speaker at the University of Kansas, Lawrence, Kansas (Fall'98).
136. Seminar speaker at the University of Colorado, Boulder, Colorado (Fall'98).
137. Talk at the Pascos 98, Northeastern University, Boston, MA, April 1998.
138. Talk at the RUN II Workshop, Fermilab, IL, May, 1998.
139. Talk at the International Symposium in High Energy Phenomenology, Madison, Wisconsin, April 1997.
140. Talk at the DPF meeting at Univ. of Minnesota, 1996.
141. Talk at SUSY 96 at Univ. of Maryland, 1996.
142. Talk at the BSMIV at Lake Tahoe, CA, 1994.
143. Talk at the DPF meeting at Albuquerque, New Mexico, 1994.
144. Talk at the International Symposium: *Physics Does Not Stop, Recent Developement in High Energy Phenomenology* , Madison, Wisconsin, April 1994.

VISITING SCIENTIST :

1. University of Bonn, Fall, 2011.
2. Brookhaven National Laboratory New York, Summer, 1998.
3. Fermi National Accelerator Laboratory, Batavia, Illinois, Summer, 1998.
4. Stanford Linear Accelerator Lab, Summer, 1997.
5. Stanford Linear Accelerator Lab, Summer, 1995.
6. University of Illinois at Urbana-Champaign, Fall, 1994.
7. Brookhaven National Laboratory New York, Summer, 1994.
8. Fermi National Accelerator Laboratory, Batavia, Illinois, Summer, 1994.
9. Fermi National Accelerator Laboratory, Batavia, Illinois, Summer, 1992.

CONFERENCE ORGANIZED:

- Co-organizer of CETUP-2023 (a workshop on neutrino and dark matter), South Dakota, June-July, 2023
- Co-organizer of the Interplay of Nuclear, Neutrino and BSM Physics at Low-Energies workshop, INT-University of Washington, April, 2023
- Co-organizer of the Nu Tools for BSM at Neutrino Beam Experiments workshop, Pitt-PAC, University of Pittsburgh, December, 2022
- Co-organizer of the Dark Universe Workshop at ICTP-SAIFR, Sao Paulo- Brazil, October, 2019
- Co-chair of SUSY 2019 at TAMU-Corpus Christi, TX, May, 2019
- Local organizing Committee member of Neutrino workshop at the University of Texas, Arlington April, 2019
- Organized and co-chaired Collider, Neutrino and Dark Matter Workshops 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2022, 2023, TAMU;
- Coherent Neutrino Scattering Experiment Workshop, Texas A&M University”, November 2015
- Co-director of the ”XVI Mexican School of Particles and Fields/BCVSPIN”, organized at Collima, Mexico, 8-13 December;
- Organized Interconnection between Particle physics and Cosmology(PPC) 2014, Leon, Mexico), PPC 2013, 2015(South Dakota), 2008(University of New Mexico)
- Organized and chaired two week dark matter program at CETUP 2012, South Dakota;
- Organized and Co-Chaired Inflation 2011, TAMU;
- Organized the First Interconnection between Particle physics and Cosmology(PPC) 2007, College Station, TX)

TEACHING :

- Electromagnetic Theory-II [Graduate];
- Quantum Field Theory I, II [Graduate];
- Introduction to Particle Physics [Graduate];
- Weak Scale Supersymmetry [Graduate];
- Methods of Theoretical Physics [Graduate];
- Mathematical Methods [Graduate]
- Electricity and Magnetism [Undergraduate];
- Mathematical Physics [Undergraduate];
- Quantum Mechanics [Graduate];

- Cosmology and General Relativity [Graduate];
- Classical Mechanics [Graduate].

OUTREACH:

- Co-organized and initiated Mitchell Institute Physics Enhancement Program-MIPEP (2012-2022)
- Presented talk at the Saturday Morning Physics for High School students.
- Participated in the Physics Festival with a demonstration every spring, 2006-2016.

SERVICE:

- Serving as a director of Mitchell Institute for Fundamental Physics and Astronomy.
- Serving as a member of the international advisory committee of the international workshop on Supersymmetry and Grand Unification(SUSY).
- Served as a member of DOE and NSF theory review panels
- Serving as a member of the editorial board of the journal: Letters in High Energy Physics.
- Serving as a member of the international advisory committee of the international workshop on interconnection between particle physics and cosmology (PPC).
- Serving as a member of the advisory committee of BCVSPIN.
- Serving as a member of the Graduate Curriculum Committee (chaired the committee).
- Served as a member and chair of the Promotion and Tenure Committee.
- Served as a member of the Undergraduate Curriculum Committee.
- Serving as a member of the Graduate Admission Committee
- Served as a Faculty Search Committee member in 5 faculty searches
- Served as a member of many (~ 25) Ph.D. committees

RESEARCH PUBLICATIONS IN JOURNALS

1. **Probing the Dark Sector with Nuclear Transition Photons**, B. Dutta, W. C. Huang and J. L. Newstead, Phys. Rev. Lett. **131** (2023) no.11, 111801
2. **Detecting axionlike particles with primordial black holes**, K. Agashe, J. H. Chang, S. J. Clark, B. Dutta, Y. Tsai and T. Xu, Phys. Rev. D **108** (2023) no.2, 023014
3. **Indirect detection of low mass dark matter in direct detection experiments with inelastic scattering**, N. F. Bell, J. B. Dent, B. Dutta, J. Kumar and J. L. Newstead, Phys. Rev. D **106** (2022) no.10, 103016

4. **L. Waites, A. Thompson, A. Bungau, J. M. Conrad, B. Dutta, W. C. Huang, D. Kim, M. Shaevitz and J. Spitz, Phys. Rev. D **107** (2023) no.9, 095010**, L. Waites, A. Thompson, A. Bungau, J. M. Conrad, B. Dutta, W. C. Huang, D. Kim, M. Shaevitz and J. Spitz, Phys. Rev. D **107** (2023) no.9, 095010.
5. **Inelastic nuclear scattering from neutrinos and dark matter**, B. Dutta, W. C. Huang, J. L. Newstead and V. Pandey, Phys. Rev. D **106** (2022) no.11, 113006.
6. **Probing new physics at DUNE operating in a beam-dump mode**, V. Brdar, B. Dutta, W. Jang, D. Kim, I. M. Shoemaker, Z. Tabrizi, A. Thompson and J. Yu, Phys. Rev. D **107** (2023) no.5, 055043.
7. **Inelastic nuclear scattering from neutrinos and dark matter**, N. F. Bell, J. B. Dent, B. Dutta, J. Kumar and J. L. Newstead, Phys. Rev. D **106**, no.10, 103016 (2022).
8. **Indirect detection of low mass dark matter in direct detection experiments with inelastic scattering**, B. Dutta, W. C. Huang, J. L. Newstead and V. Pandey, Phys. Rev. D **106**, no.11, 113006 (2022).
9. **Sensitivity to dark sector scales from gravitational wave signatures** J. B. Dent, B. Dutta, S. Ghosh, J. Kumar and J. Runburg, JHEP **08**, 300 (2022)
10. **Probing an MeV-scale scalar boson in association with a TeV-Scale top-quark partner at the LHC**, B. Dutta, S. Ghosh, A. Gurrola, D. Julson, T. Kamon and J. Kumar, JHEP **03** (2023), 164
11. **Correlating gravitational wave and gamma-ray signals from primordial black holes**, K. Agashe, J. H. Chang, S. J. Clark, B. Dutta, Y. Tsai and T. Xu, Phys. Rev. D **105**, no.12, 123009 (2022)
12. **Solutions to the MiniBooNE Anomaly from New Physics in Charged Meson Decays**, B. Dutta, D. Kim, A. Thompson, R. T. Thornton and R. G. Van de Water, Phys. Rev. Lett. **129**, no.11, 111803 (2022)
13. **Leptonic scalars and collider signatures in a UV-complete model**, P. S. B. Dev, B. Dutta, T. Ghosh, T. Han, H. Qin and Y. Zhang, JHEP **03**, 068 (2022)
14. **Searching for dark matter signals in timing spectra at neutrino experiments**, B. Dutta, D. Kim, S. Liao, J. C. Park, S. Shin, L. E. Strigari and A. Thompson, JHEP **01**, 144 (2022)
15. **Extending the reach of leptophilic boson searches at DUNE and MiniBooNE with bremsstrahlung and resonant production**, F. Capozzi, B. Dutta, G. Gurung, W. Jang, I. M. Shoemaker, A. Thompson and J. Yu, Phys. Rev. D **104**, no.11, 115010 (2021)
16. **Cosmic-ray upscattered inelastic dark matter**, N. F. Bell, J. B. Dent, B. Dutta, S. Ghosh, J. Kumar, J. L. Newstead and I. M. Shoemaker, Phys. Rev. D **104**, 076020 (2021)
17. **Explaining $g_\mu - 2$ and $R_{K^{(*)}}$ using the light mediators of $U(1)_{T3R}$** , B. Dutta, S. Ghosh, P. Huang and J. Kumar, Phys.Rev.D **105** 1, 015011 (2022).

18. **Pathfinder for a High Statistics Search for Missing Energy In Gamma Cascades**, J. B. Dent, B. Dutta, A. Jastram, D. Kim, A. Kubik, R. Mahapatra, S. Rajendran, H. Ramani, A. Thompson and S. Verma, *Phys.Rev.D* **105** 1, 015030 (2022)
19. **Light, long-lived B – L gauge and Higgs bosons at the DUNE near detector**, P. S. B. Dev, B. Dutta, K. J. Kelly, R. N. Mohapatra and Y. Zhang, *JHEP* **07**, 166 (2021)
20. **Coherent elastic neutrino-nucleus scattering with the ν BDX-DRIFT directional detector at next generation neutrino facilities**, D. Aristizabal Sierra, B. Dutta, D. Kim, D. Snowden-Ifft and L. E. Strigari, *Phys. Rev. D* **104**, no.3, 033004 (2021)
21. **Probing L_μ - L_τ models with CE ν NS: A new look at the combined COHERENT CsI and Ar data**, H. Banerjee, B. Dutta and S. Roy, *Phys. Rev. D* **104**, no.1, 015015 (2021)
22. **Low-mass inelastic dark matter direct detection via the Migdal effect**, N. F. Bell, J. B. Dent, B. Dutta, S. Ghosh, J. Kumar and J. L. Newstead, *Phys. Rev. D* **104**, no.7, 7 (2021)
23. **Gamma ray signals from cosmic ray scattering on axionlike particles**, J. B. Dent, B. Dutta, J. L. Newstead, A. Rodriguez, I. M. Shoemaker, Z. Tabrizi and N. T. Arellano, *Phys. Rev. D* **104**, no.5, 055044 (2021)
24. **Axionlike Particles at Future Neutrino Experiments: Closing the Cosmological Triangle** V. Brdar, B. Dutta, W. Jang, D. Kim, I. M. Shoemaker, Z. Tabrizi, A. Thompson and J. Yu, *Phys. Rev. Lett.* **126**, no.20, 201801 (2021)
25. **Supersymmetric gauged $U(1)_{L_\mu-L_\tau}$ model for electron and muon $(g-2)$ anomaly** H. Banerjee, B. Dutta and S. Roy, *JHEP* **03**, 211 (2021)
26. **Present and future status of light dark matter models from cosmic-ray electron upscattering** J. B. Dent, B. Dutta, J. L. Newstead, I. M. Shoemaker and N. T. Arellano, *Phys. Rev. D* **103**, 095015 (2021)
27. **Constraints on MeV dark matter and primordial black holes: Inverse Compton signals at the SKA** B. Dutta, A. Kar and L. E. Strigari, *JCAP* **03**, 011 (2021)
28. **Opportunities for probing $U(1)_{T3R}$ with light mediators** B. Dutta, S. Ghosh and J. Kumar, *Phys. Rev. D* **102**, no.7, 075041 (2020)
29. **Nonlocal effects from boosted dark matter in indirect detection** K. Agashe, S. J. Clark, B. Dutta and Y. Tsai, *Phys. Rev. D* **103**, no.8, 083006 (2021)
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