

Publication List

Peter B. Denton

Updated: September 5, 2017¹

Articles

- [1] P. B. Denton, D. Marfatia, and T. J. Weiler, “The Galactic Contribution to IceCube’s Astrophysical Neutrino Flux,” *JCAP* **1708** no. 08, (2017) 033, [arXiv:1703.09721 \[astro-ph.HE\]](#).
- [2] P. Coloma, P. B. Denton, M. C. Gonzalez-Garcia, M. Maltoni, and T. Schwetz, “Curtailling the Dark Side in Non-Standard Neutrino Interactions,” *JHEP* **04** (2017) 116, [arXiv:1701.04828 \[hep-ph\]](#).
- [3] P. B. Denton, H. Minakata, and S. J. Parke, “Compact Perturbative Expressions For Neutrino Oscillations in Matter,” *JHEP* **06** (2016) 051, [arXiv:1604.08167 \[hep-ph\]](#).
- [4] P. B. Denton and T. J. Weiler, “Sensitivity of full-sky experiments to large scale cosmic ray anisotropies,” *JHEAp* **8** (2015) 1–9, [arXiv:1505.03922 \[astro-ph.HE\]](#).
- [5] P. B. Denton and T. J. Weiler, “The Fortuitous Latitude of the Pierre Auger Observatory and Telescope Array for Reconstructing the Quadrupole Moment,” *Astrophys.J.* **802** no. 1, (2015) 25, [arXiv:1409.0883 \[astro-ph.HE\]](#).
- [6] L. A. Anchordoqui, P. B. Denton, H. Goldberg, T. C. Paul, L. H. M. Da Silva, B. J. Vlcek, and T. J. Weiler, “Weinberg’s Higgs portal confronting recent LUX and LHC results together with upper limits on B^+ and K^+ decay into invisibles,” *Phys. Rev.* **D89** no. 8, (2014) 083513, [arXiv:1312.2547 \[hep-ph\]](#).
- [7] P. B. Denton and T. J. Weiler, “Using Integral Dispersion Relations to Extend the LHC Reach for New Physics,” *Phys. Rev.* **D89** no. 3, (2014) 035013, [arXiv:1311.1248 \[hep-ph\]](#).
- [8] N. Arsene, L. I. Caramete, P. B. Denton, and O. Micu, “Quantum Black Holes Effects on the Shape of Extensive Air Showers,” [arXiv:1310.2205 \[hep-ph\]](#).

¹For the latest version see: [peterdenton.github.io](#)

Conference Proceedings

- [1] **JEM-EUSO** Collaboration, P. B. Denton, L. A. Anchordoqui, A. A. Berlind, M. Richardson, and T. J. Weiler, “Sensitivity of orbiting JEM-EUSO to large-scale cosmic-ray anisotropies,” *J.Phys.Conf.Ser.* **531** (2014) 012004, [arXiv:1401.5757 \[astro-ph.IM\]](#).

Talks

- [1] “What we can tell about the sources of icecube’s neutrinos, and what icecube can tell us about gamma ray bursts.” <http://astro.fnal.gov/events/event/tbd-35/>. Astrophysics theory seminar at Fermilab August 2017 in Batavia, IL.
- [2] “The galactic contribution to icecube’s astrophysical neutrino flux.” <https://indico.cern.ch/event/615891/contributions/2608935/>. Talk given at TeV Particle Astrophysics at CCAPP in Columbus, OH.
- [3] “Finding anisotropies in cosmic rays and neutrinos.” <http://nbia.nbi.ku.dk/nbia-seminars/nbia-seminar-peter-denton/>. Invited seminar at the Niels Bohr International Academy astroparticle seminar April 2017 in Copenhagen.
- [4] “Analytic and compact perturbative expressions for neutrino oscillations in matter.”. Talk given at the Center of Excellence for Particle Physics at the Terascale at the University of Melbourne December 2016.
- [5] “Spherical harmonics as a tool for finding anisotropies in uhecr and astrophysical neutrino fluxes.”. Invited talk given at the Danish Astroparticle Physics Meeting October 2016 in Odense.
- [6] “The standard neutrino oscillation parameters and a surprising alternative solution.”. Invited N-Talk at Niels Bohr International Academy September 2016 in Copenhagen.
- [7] “Analytic and compact perturbative expressions for neutrino oscillations in matter.” <http://indico.cern.ch/event/432527/contributions/1071859/>. Talk given at the International Conference of High Energy Physics August 2016 in Chicago, IL.
- [8] “Analytic and compact perturbative expressions for neutrino oscillations in matter.” <http://theory.fnal.gov/seminars/seminars.html>. Invited talk at the Fermilab theory seminar July 2016 in Batavia, IL.
- [9] “Methods for probing new physics at high energies.” <https://events.vanderbilt.edu/index.php?eID=90084>. Successful dissertation defense at Vanderbilt University June 2016 in Nashville, TN.
- [10] “Analytic and compact perturbative expressions for neutrino oscillations in matter.” <http://www.ccsem.infn.it/issp2016/index.html>. Talk given at the International School of Subnuclear Physics May 2016 in Erice, Sicily.

- [11] “Analytic and compact perturbative expressions for neutrino oscillations in matter.” <https://indico.cern.ch/event/489180/contributions/2158195/>. Talk given at Pheno May 2016 in Pittsburgh, PA.
- [12] “Cosmic ray anisotropy with partial sky exposure.”. Invited seminar November 2015 at CCAPP.
- [13] “The effect of a maximum lepton energy on the stability of pions and cosmic ray physics.” <http://meetings.aps.org/link/BAPS.2015.APR.M14.1>. Talk given at the APS April meeting 2015 in Baltimore, MD.
- [14] “Particle physics at the highest energies.”. Invited seminar December 2014 at the University of Wisconsin – Madison.
- [15] “Sensitivity of orbiting JEM-EUSO to large-scale cosmic-ray anisotropies.”. Talk given at the Cosmic Ray Anisotropy Workshop September 2013 in Madison, WI.
- [16] “Using dispersion relations to look for new physics in pp elastic scattering at the LHC.” <http://meetings.aps.org/link/BAPS.2013.APR.H12.8>. Talk given at the APS April meeting 2013 in Denver, CO.

Code

- [1] P. B. Denton, “ANA v1.0.0: Astrophysical Neutrino Anisotropy,” Mar., 2017.
<https://doi.org/10.5281/zenodo.438675>.
<https://github.com/PeterDenton/ANA>.
- [2] P. B. Denton, “Nu-Pert v0.2.2: Analytic and compact perturbative expressions for neutrino oscillations in matter,” June, 2016.
<https://doi.org/10.5281/zenodo.54629>.
<https://github.com/PeterDenton/Nu-Pert>.

Thesis

- [1] P. B. Denton, *Methods for Probing New Physics at High Energies*. PhD thesis, Vanderbilt U., 2016-12-18.
<http://etd.library.vanderbilt.edu/available/etd-07052016-131020/>.