

Elizabeth Worcester

Brookhaven National Laboratory



Education

- Ph.D. Physics, University of Chicago, 2007, “Measurements of Direct CP Violation, CPT Symmetry, and Other Parameters in the Neutral Kaon System”; Advisor: Edward Blucher
- M.S. Physics, University of California at Los Angeles, 1998.
- B.S. Physics, Georgia Institute of Technology, 1997.

Research and Professional Experience

- Adjunct Professor of Physics, Stony Brook University, 2016-present, Physicist, Brookhaven National Laboratory, 2013-present
 - SBN Oscillations Working Group Convener
 - ICARUS Event Selection and Analysis Working Group Convener
 - DUNE Physics Coordinator 2016-2021
 - DUNE Long-Baseline Working Group Convener 2015-2016
 - DUNE, Theia, and SBN oscillation sensitivity analyses
 - Cold electronics for DUNE/protoDUNE/SBND
- Research Associate, Brookhaven National Laboratory, 2011-2013
- Part-time Research Consultant, University of Chicago, 2010-2011

Selected Recent Publications

- P. Huber *et al.*, “Snowmass Neutrino Frontier Report,” 11, 2022. [arXiv:2211.08641](#) [[hep-ex](#)]
- E. Worcester, “Neutrino Mystery Endures,” *Physics* **15** (6, 2022) 85
- DUNE Collaboration, A. A. Abud *et al.*, “Snowmass Neutrino Frontier: DUNE Physics Summary,” 3, 2022. [arXiv:2203.06100](#) [[hep-ex](#)]
- PIONEER Collaboration, W. Altmannshofer *et al.*, “Testing Lepton Flavor Universality and CKM Unitarity with Rare Pion Decays in the PIONEER experiment,” in *2022 Snowmass Summer Study*. 3, 2022. [arXiv:2203.05505](#) [[hep-ex](#)]
- DUNE Collaboration, B. Abi *et al.*, “Long-baseline neutrino oscillation physics potential of the DUNE experiment,” *Eur. Phys. J. C* **80** no. 10, (2020) 978, [arXiv:2006.16043](#) [[hep-ex](#)]
- DUNE Collaboration, B. Abi *et al.*, “Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume II DUNE Physics,” [arXiv:2002.03005](#) [[hep-ex](#)]
- Theia Collaboration, M. Askins *et al.*, “Theia: An advanced optical neutrino detector,” *Eur. Phys. J. C* **80** no. 5, (2020) 416, [arXiv:1911.03501](#) [[physics.ins-det](#)]

Community Activities

- **Selected Recent Presentations:** I have given talks on DUNE/SBN/neutrinos at Brown (2022), NDM (2022), Lepton Photon (2022), the FNAL Users’ Meeting (2021), the US Japan Symposium (2021, 2019), CIEMAT (2021), FNAL (2020), APS-DPF (2019), Neutrino 2018, and many others.
- **Selected Committees:** I am Deputy Chair of the SBN IB, a member of the FNAL PAC, a member of the LHC Experiments Committee (LHCC), and was a convener of the Neutrino Frontier for Snowmass. I am a member and past-chair of the BNL NPP DEI Council and a member of the SBND Code of Conduct Committee. I was on the DPF Executive Committee from 2018-2020.