Elizabeth Worcester

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Education

- **University of Chicago** — Chicago, IL
  Ph.D. Physics — *2007*
  - Advisor: Edward Blucher
  - Dissertation: Measurements of Direct CP Violation, CPT Symmetry, and Other Parameters in the Neutral Kaon System
- **University of California at Los Angeles** — Los Angeles, CA
  M.S. Physics — *1998*
- **Georgia Institute of Technology** — Atlanta, GA
  B.S. Physics — *1997*
  - *With Highest Honor*
  - Certificate in American Literature

Research

- **DUNE/LBNE** — Brookhaven National Lab, Stony Brook University
  Neutrino Oscillation Sensitivity at Long Baselines — *2011-present*

  Studying the sensitivity of neutrino oscillation measurements, with a focus on the long-baseline muon neutrino disappearance and electron neutrino appearance measurements of mass hierarchy, CP violation, and the octant of θ_{23}, in the Deep Underground Neutrino Experiment (DUNE).

  - Spokesperson Advisory Committee, 2023-2025
  - Physics Co-coordinator, 2019-2021
  - Deputy Physics Coordinator, 2016-2019
  - DUNE Executive Board, 2019-2021
  - DUNE Authorship and Publication Board, 2017-2021
  - protoDUNE Cold Electronics QC Coordinator, 2017-2018
  - Co-convener of DUNE Long-Baseline Physics Working Group, 2015-2016
  - Co-convener of DUNE CD-1 Interim Systematics Task Force, 2015
  - Co-convener of LBNE Long-Baseline Physics Working Group, 2014-2015

- **Short-Baseline Neutrino Program** Brookhaven National Lab
  SBND & ICARUS *2015-present*

  Studying short-baseline neutrino oscillation and neutrino interactions using liquid argon TPCs at Fermilab as a member of both SBND and ICARUS, with a particular focus on event selection and analysis.

  - SBND PI for BNL
  - SBND Deputy-L2 Project Manager for Cold Electronics, focusing on quality assurance, installation, and integration. Co-coordinator for Cold Electronics Commissioning
  - Co-convener of ICARUS Event Selection and Analysis Working Group, 2022-present
  - SBN Rules Writing Committee for Publication Policy, 2020-present
  - SBND Code of Conduct Drafting Committee, 2020-2021
  - SBN Deputy IB Chair, 2022-present

- **THEIA** Brookhaven National Lab
  Beam Tests and Experiment Design *2012-present*
  - Studying long-baseline oscillation sensitivity for THEIA.
  - Studied properties of WbLS in beam tests at BNL's NASA Space Radiation Laboratory.

- **NA62** Brookhaven National Lab
  Investigation of Potential Involvement *2014-2015*

  Participated in the 2014 and 2015 runs of NA62, an experiment at CERN to measure the branching ratio of $K^+ \to \pi^+ \nu\bar{\nu}$ decay. Lead investigation of possible expanded US involvement in NA62.

- **Daya Bay Reactor Neutrino Experiment** Brookhaven National Lab
  Neutrino Oscillation Parameters in Reactor Antineutrino Disappearance *2011-2018*

  Studied reactor electron-antineutrino disappearance at the Daya Bay experiment in Guongdong, China, with a focus on the combined analysis of neutron capture on hydrogen and gadolinium, the MC simulation of scintillation, energy calibration, and data quality.

- **ORKA** Brookhaven National Lab
  R&D and Experiment Design *2011-2014*

  Member of collaboration proposing ORKA, an experiment to precisely measure the branching ratio of $K^+ \to \pi^+ \nu\bar{\nu}$ decay using the Main Injector at FNAL.

- **KTeV Analysis** University of Chicago
  Dalitz Decay Measurements *2010-2011*

  Facilitated study of Dalitz decays of neutral pions in data taken by the KTeV experiment at FNAL by performing preliminary investigation of a new analysis searching for dark photons in KTeV data and working with KTeV collaborators and computing experts at FNAL to preserve access to KTeV data.

- **KTeV Analysis** University of Chicago
  CP Violation and CPT Symmetry in the Neutral Kaon System *1999 - 2010*

  Made precise measurements of the direct CP violation parameter $Re(\epsilon'/\epsilon)$ and the kaon parameters Δm, τ_S, ϕ_ϵ, and $\Delta\phi$ using data from the KTeV experiment. Important aspects of the analysis include precise calibration of particle detectors, measurement of detector acceptance using a detailed Monte Carlo simulation, and careful evaluation of systematic uncertainties. Responsible for detector calibration, improved simulation and reconstruction techniques for electromagnetic showers in the CSI calorimeter, and the final data analysis including evaluation of systematic uncertainty.

- **KTeV 1999 Run** UCLA
  Detector Maintenance and Data Acquisition *1998 - 2000*
  - Responsible for re-commissioning and maintenance of the regenerator and photon veto detectors.
  - Responsible for data-taking and monitoring of the KTeV experiment during frequent shifts in the experiment control room.

- **MACHO/GMAN** University of Notre Dame
  Microlensing Observations *1997 - 1998*
  - Telescope operator for follow-up observation of microlensing events for the MACHO/GMAN collaboration using the 74-inch telescope at Mt. Stromlo Observatory in Canberra, Australia.
  - Contributed to development of analysis software used to study microlensing events.

- **CTIO REU Program** Cerro Tololo Inter-American Observatory
  Supernova Studies *1996*
  - Responsible for analysis of infrared photometry follow-up observations of supernova 1987a.
  - Participated in High-z Supernova Search to identify Type 1a supernovae at the CTIO 4-m telescope.

Presentations

- *PIONEER/Rare Pion Decay*
  - **Kaon2022** Osaka, Japan
    PIONEER: Precision Measurements of Rare Pion Decays *September 2022*
- *Short Baseline Neutrino Program (SBN)*
  - **Fermilab Users Meeting** Remote
    Sterile Neutrino Searches at Fermilab *August 2021*
- *Long-Baseline Neutrino Oscillation (DUNE/LBNF/LBNE)*

- **HEP Seminar, CIEMAT** — Remote
  DUNE Long-Baseline Physics — *February 2021*
- **Snowmass NF01 Workshop** — Remote
  Oscillation Physics in DUNE — *October 2020*
- **HET Lunch Seminar, BNL** — Remote
  DUNE Long-Baseline Physics — *August 2020*
- **PROSPECT Oscillation Workshop** — Remote
  LBL-SBL Connections: Experimental Perspective — *August 2020*
- **Fermilab Neutrino Seminar, FNAL** — Remote
  DUNE Long-Baseline Physics — *May 2020*
- **Module of Opportunity for DUNE Workshop, BNL** — Upton, NY
  DUNE Physics — *November 2019*
- **Physics Colloquium, Texas Tech University** — Lubbock, TX
  The Science and Detectors of DUNE — *October 2018*
- **Neutrino 2018** — Heidelberg, Germany
  DUNE: Status and Science — *June 2018*
- **Johns Hopkins University/University of Maryland Seminar** — Baltimore, MD
  The Science and Detectors of DUNE — *March 2018*
- **HEX Seminar, Rutgers University** — New Brunswick, NJ
  The Science and Detectors of DUNE — *March 2018*
- **Physics Colloquium, Colorado State University** — Fort Collins, CO
  The Science and Detectors of DUNE — *February 2018*
- **Stan/Physics Workshop** — Cambridge, MA
  Intro to Long-Baseline Physics and DUNE — *September 2017*
- **APS April Meeting 2017** — Washington, DC
  Long-Baseline Physics in DUNE — *January 2017*
- **Particle Physics Seminar, Stony Brook University** — Stony Brook, NY
  Preparing for Physics at DUNE — *November 2016*
- **ICHEP 2016** — Chicago, IL
  DUNE Physics Program — *August 2016*
- **Neutrino Day Public Lecture** — Lead, SD
  Catching Neutrinos at SURF — *July 2016*
- **Neutrino - Latin America Workshop, FNAL** — Batavia, IL
  Long-baseline Oscillation Physics in DUNE — *April 2016*
- **SLAC Experimental Seminar** — Menlo Park, CA
  The Path to CP Violation Discovery at DUNE — *March 2016*
- **NuInt15, Osaka University** — Osaka, Japan
  DUNE Strategy for Controlling Systematic Uncertainties — *November 2015*
- **NNN 2015, Stony Brook University** — Stony Brook, NY
  DUNE Strategy for Controlling Systematic Uncertainties — *October 2015*
- **Workshop for Large Neutrino Infrastructures, FNAL** — Batavia, IL
  Impact of Systematics on Future Long-Baseline Experiments — *April 2015*
- **WINP 2015, BNL** — Upton, NY
  What is Needed for Precision Measurements at LBNF? — *February 2015*
- **HEP Seminar, University of Pennsylvania** — Philadelphia, PA
  Towards Precision Measurements at LBNF — *January 2015*
- **NOW 2014** — Conca Specchiulla, Italy
  LBNE to LBNF — *September 2014*

- **Neutrino 2014** — Boston, MA
  Poster: LBNE Systematic Uncertainty — *June 2014*
- **EPS-HEP 2013** — Stockholm, Sweden
  LBNE — *July 2013*
- **Particle Physics Seminar, BNL** — Upton, NY
  LBNE in the Precision Era of Neutrino Oscillation — *February 2013*

- *Neutrinos: General*
  - **Brown University Physics Colloquium** — Providence, RI
    Accelerator-based Neutrino Physics: DUNE & SBN — *November 2022*
  - **Snowmass Community Summer Study** — Seattle, WA
    Neutrino Frontier Work Plan — *July 2022*
  - **NDM 2022** — Asheville, NC
    Future LBL Experiments — *May 2022*
  - **Lepton Photon 2022** — Remote
    Future Neutrino Experiments — *January 2022*
  - **US-Japan Symposium** — Remote
    Snowmass: Neutrino Frontier — *April 2021*
  - **Snowmass Community Planning Meeting** — Remote
    Neutrino Frontier Summary — *October 2020*
  - **APS-DPF, Northeastern University** — Boston, MA
    Future of Precision Neutrino Oscillation Measurements — *August 2019*
  - **US-Japan 40th Anniversary Symposium** — Honolulu, HI
    Ongoing cooperation in neutrino research — *April 2019*
  - **Pheno 2018, Univerisity of Pittsburgh** — Pittburgh, PA
    Neutrino Experiments: Present and Future — *May 2018*
  - **TRISEP Summer School on Elementary Particles, SNOLAB** — Sudbury, ON
    Long-baseline Neutrino Oscillation — *July 2017*
  - **Neutrino University Summer Lectures, FNAL** — Batavia, IL
    Current and Future Oscillation Experiments — *August 2016*

- *Observation of Electron Antineutrino Disappearance at Daya Bay*
  - **Symposium on Symmetries in Subatomic Physics** — Victoria, BC
    Recent Results from Daya Bay — *June 2015*
  - **Division of Particles and Fields** — Santa Cruz, CA
    August 2013
  - **HEP Seminar, University of Pennsylvania** — Philadelphia, PA
    April 2012

- *ORKA: The Golden Kaon Experiment*
  - **HEP Seminar, University of Virginia** — Charlottesville, VA
    September 2013
  - **Snowmass Community Summer Study** — Minneapolis, MN
    Probing New Physics with ORKA — *July 2013*
  - **Brookhaven Forum** — Upton, NY
    May 2013
  - **Kaon 2013** — Ann Arbor, MI
    May 2013

- **BEACH 2012** — Wichita, KS, *July 2012*
- **Users' Meeting, FNAL** — Batavia, IL, *June 2012*
- **Project X Physics Study, FNAL** — Batavia, IL, *June 2012*
  Physics Breadth

- *KTeV Measurement of $Re(\epsilon'/\epsilon)$ and Other Kaon Parameters*
  - **Project X Physics Study, FNAL** — Batavia, IL, *June 2012*
    The KTeV CsI Calorimeter
  - **Particle Physics Seminar, BNL** — Upton, NY, *August 2011*
  - **Division of Particles and Fields** — Detroit, MI, *July 2009*
  - **Heavy Quarks and Leptons** — Melbourne, Australia, *June 2008*
  - **HEP Seminar, University of Chicago** — Chicago, IL, *April 2008*
  - **Wine and Cheese Seminar, FNAL** — Batavia, IL, *February 2008*
  - **Rencontres de Blois** — Blois, France, *June 2002*

- *Other Topics*
  - **Snowmass & Precision Frontier Spring Meeting** — Remote, *May 2022*
    Kaon Experiments
  - **Snowmass Rare & Precision Frontier Town Hall** — Remote, *October 2020*
    US Kaon Physics/KOTO Step-2 LOIs
  - **Belle-II Summer School, BNL** — Upton, NY, *July 2019*
    Statistical Analysis in High-Energy Physics
  - **FroST 2016, FNAL** — Batavia, IL, *March 2016*
    WCD-Like Detectors and DUNE Long-Baseline Physics
  - **Dark Interactions, BNL** — Upton, NY, *June 2014*
    Dark Photon Searches in Meson-Decay Experiments
  - **Water-Based Liquid Scintillator Workshop** — Berkeley, CA, *May 2014*
    Long-baseline physics with WbLS
  - **American Astronomical Society** — Toronto, Canada, *January 1997*
    Poster: Infrared Photometry of SN1987a

Selected 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.*, "Experiment Simulation Configurations Approximating DUNE TDR," arXiv:2103.04797 [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]
- D. Adams *et al.*, "The ProtoDUNE-SP LArTPC Electronics Production, Commissioning, and Performance," *JINST* **15** no. 06, (2020) P06017, arXiv:2002.01782 [physics.ins-det]
- **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]
- **KTeV** Collaboration, E. Abouzaid *et al.*, "Measurement of the branching ratio of π^0 Dalitz Decay using $K_L \to \pi^0\pi^0\pi^0$ Decays," *Phys. Rev. D* **100** no. 3, (2019) 032003, arXiv:1902.01375 [hep-ex]
- **DUNE** Collaboration, T. Alion *et al.*, "Experiment Simulation Configurations Used in DUNE CDR," arXiv:1606.09550 [physics.ins-det]
- **Daya Bay** Collaboration, F. An *et al.*, "Spectral measurement of electron antineutrino oscillation amplitude and frequency at Daya Bay," *Phys. Rev. Lett.* **112** (2014) 061801, arXiv:1310.6732 [hep-ex]
- **KTeV** Collaboration, E. Abouzaid *et al.*, "Precise Measurements of Direct CP Violation, CPT Symmetry, and Other Parameters in the Neutral Kaon System," *Phys. Rev. D* **83** (2011) 092001, arXiv:1011.0127 [hep-ex]
- D. Bennett *et al.*, "Gravitational microlensing evidence for a planet orbiting a binary star system," *Nature* **402** (1999) 57, arXiv:astro-ph/9908038
- P. Garnavich *et al.*, 1996 International Astronomical Union Circular 6358.

Funding, Awards & Honors

- **PI US/Japan: KOTO** — DOE, *2019-present*
- **PI US/Japan: 3DST** — DOE, *2018-2019*
- **Fundamental Physics Prize (Daya Bay Collaboration)** — Breakthrough Prize, *2016*
- **Real.Strong.Women. of Distinction Award** — Alpha Chi Omega, *2015*
- **Young Scientist Award** — Heavy Quarks and Leptons, Melbourne, *2008*
- **Graduate Opportunity Fellowship** — UCLA, *1997*

Service

- **Physics Advisory Committee (PAC)** Fermilab *2021-present*
- **National Mentoring Community Mentor** APS *2021*
- **Snowmass Neutrino Frontier Convener** DPF *2020-2022*
- **Ethics Task Force** DPF *2020*
- **LHC Experiments Committee** CERN *2019-present*
- **NPP Diversity, Equity, and Inclusion Council** Brookhaven National Lab
  Member *2019-present*
  Chair Elect *2020-2021*
  Chair *2021-2022*
  Past Chair *2022-2023*
- **Journal reviewer** PRL, PRB, PRD *2018-present*
- **Junior Staff Promotion Committee** Brookhaven National Lab *2018-present*
- **Work-Life Balance Committee** Brookhaven National Lab *2018-present*
- **Executive Committee Member at Large** DPF *2018-2020*
- **Neutrino Oscillation Workshop Session Convener** Ostuni,Italy *2018*
- **BWIS Goldhaber Prize Selection Committee** Brookhaven National Lab *2018*
- **Intensity Frontier Comparative Review Committee** DOE *2017, 2019, 2021*
- **Stan/Physics Workshop Organzier** BNL/MIT *2017*
- **Leona Woods Selection Committee** Brookhaven National Lab *2017-present*
- **Brookhaven Forum Organizing Committee** Brookhaven National Lab *2017-present*
- **Physics and Astronomy Seminar Co-Organizer** Stony Brook University *2017, 2021*
- **Cold Electronics Mini Summer School Organizer** Brookhaven National Lab *2016*

- **Neutrino Physics Center Advisory Board** Fermilab
  2016-present
- **PhyStat-ν Scientific Organizing Committee** Fermilab, Batavia, IL
  2016
- **PhyStat-ν Scientific Organizing Committee** IPMU, Kashiwa, Japan
  2015-2016
- **Particle Physics Seminar Committee** Brookhaven National Lab
  2013-2015
- **Brookhaven Forum Organizing Committee** Brookhaven National Lab
  2015
- **Co-editor of Proceedings** CETUP*14, Deadwood, SD
  2014-2015
- **Co-convener for Long-baseline Systematics** CETUP*14, Deadwood, SD
  2014
- **Co-convener for Quark and Lepton Flavor Physics** DPF, Santa Cruz, CA
  2013

Teaching

- **Professor**
  - **Graduate Seminar (Phy 599)** Stony Brook University
    Fall 2018, Spring 2020, Spring 2022, Spring 2023
- **Teaching Assistant**
  - **Elementary Particle Physics** UCLA
    Winter 1998
  - **Introduction to Electromagnetism** UCLA
    Fall 1997
  - **Calculus of Multivariable Integration** Georgia Tech
    Fall 1996

Mentoring

- Postdoctoral Researchers: Matthew Bass (formerly BNL Goldhaber Fellow, currently industry), Mateus Fernandes Carneiro da Silva (BNL), Diana Mendez Mendez (BNL), Michael Mooney (formerly BNL, currently Colorado State University), Arbin Timilsina (formerly BNL, currently industry)
- Graduate Students: Jacob Larkin (Stony Brook University), Kuan Qi (MS, Stony Brook University)
- Undergraduate Students: Justin Bryant, Amanda Depoain, August Gula, Diana Hernandez, Jacob Smith, Colin Swee

Appointment History

- **Physicist** Brookhaven National Lab *2017-present*
- **Adjunct Professor** Stony Brook University *2016-present*
- **Associate Physicist** Brookhaven National Lab *2015-2017*
- **Assistant Physicist** Brookhaven National Lab *2013-2015*
- **Postdoctoral Research Associate** Brookhaven National Lab *2011-2013*
- **Part-time Research Consultant** University of Chicago *2010-2011*
- **Stay-at-home mother** No employer *2007-2010*
- **Graduate Research Assistant** University of Chicago *2002-2007*
- **Graduate Research/Teaching Assistant** UCLA *1997-2002*
- **Telescope Operator/Research Assistant** University of Notre Dame *1997*

Personal Information

Full Name: Elizabeth Turner Worcester
Former Name: Shirley Elizabeth Turner (before August 24, 2002)
Date of Birth: September 23, 1975
Place of Birth: Berlin, Vermont
Home address: 351 Pipe Stave Hollow Road, Miller Place, NY 11764

Full Publication List

[1] P. Huber *et al.*, "Snowmass Neutrino Frontier Report," 11, 2022. arXiv:2211.08641 [hep-ex].

[2] **DUNE** Collaboration, A. Abed Abud *et al.*, "Identification and reconstruction of low-energy electrons in the ProtoDUNE-SP detector," arXiv:2211.01166 [hep-ex].

[3] **DUNE** Collaboration, A. Abed Abud *et al.*, "DUNE Offline Computing Conceptual Design Report," arXiv:2210.15665 [physics.data-an].

[4] **Daya Bay** Collaboration, F. P. An *et al.*, "Improved Measurement of the Evolution of the Reactor Antineutrino Flux and Spectrum at Daya Bay," arXiv:2210.01068 [hep-ex].

[5] E. Goudzovski *et al.*, "Weak Decays of Strange and Light Quarks," arXiv:2209.07156 [hep-ex].

[6] E. Worcester, "Neutrino Mystery Endures," *Physics* **15** (6, 2022) 85.

[7] **DUNE** Collaboration, A. Abed Abud *et al.*, "Separation of track- and shower-like energy deposits in ProtoDUNE-SP using a convolutional neural network," *Eur. Phys. J. C* **82** no. 10, (2022) 903, arXiv:2203.17053 [physics.ins-det].

[8] **DUNE** Collaboration, A. Abed Abud *et al.*, "Scintillation light detection in the 6-m drift-length ProtoDUNE Dual Phase liquid argon TPC," *Eur. Phys. J. C* **82** no. 7, (2022) 618, arXiv:2203.16134 [physics.ins-det].

[9] M. A. Acero *et al.*, "White Paper on Light Sterile Neutrino Searches and Related Phenomenology," 3, 2022. arXiv:2203.07323 [hep-ex].

[10] **Daya Bay** Collaboration, F. P. An *et al.*, "First measurement of high-energy reactor antineutrinos at Daya Bay," arXiv:2203.06686 [hep-ex].

[11] A. A. Abud *et al.*, "A Gaseous Argon-Based Near Detector to Enhance the Physics Capabilities of DUNE," 3, 2022. arXiv:2203.06281 [hep-ex].

[12] **DUNE** Collaboration, A. A. Abud *et al.*, "Snowmass Neutrino Frontier: DUNE Physics Summary," 3, 2022. arXiv:2203.06100 [hep-ex].

[13] **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].

[14] **PIONEER** Collaboration, W. Altmannshofer *et al.*, "PIONEER: Studies of Rare Pion Decays," arXiv:2203.01981 [hep-ex].

[15] **Theia** Collaboration, M. Askins *et al.*, "Theia: Summary of physics program. Snowmass White Paper Submission," in *2022 Snowmass Summer Study.* 2, 2022. arXiv:2202.12839 [hep-ex].

[16] **DUNE** Collaboration, A. A. Abud *et al.*, "Low exposure long-baseline neutrino oscillation sensitivity of the DUNE experiment," arXiv:2109.01304 [hep-ex].

[17] **DUNE** Collaboration, A. A. Abud *et al.*, "Design, construction and operation of the ProtoDUNE-SP Liquid Argon TPC," arXiv:2108.01902 [physics.ins-det].

[18] **DUNE** Collaboration, A. A. Abud *et al.*, "Searching for Solar KDAR with DUNE," arXiv:2107.09109 [hep-ex].

[19] F. P. An *et al.*, "Joint Determination of Reactor Antineutrino Spectra from ^{235}U and ^{239}Pu Fission by Daya Bay and PROSPECT," arXiv:2106.12251 [nucl-ex].

[20] **DUNE** Collaboration, A. Abed Abud *et al.*, "Deep Underground Neutrino Experiment (DUNE) Near Detector Conceptual Design Report," arXiv:2103.13910 [physics.ins-det].

[21] **DUNE** Collaboration, B. Abi *et al.*, "Experiment Simulation Configurations Approximating DUNE TDR," arXiv:2103.04797 [hep-ex].

[22] **Daya Bay** Collaboration, F. P. An *et al.*, "Antineutrino Energy Spectrum Unfolding Based on the Daya Bay Measurement and Its Applications," arXiv:2102.04614 [hep-ex].

[23] **SBND** Collaboration, R. Acciarri *et al.*, "Cosmic Background Removal with Deep Neural Networks in SBND," arXiv:2012.01301 [physics.data-an].

[24] **DUNE** Collaboration, B. Abi *et al.*, "Prospects for Beyond the Standard Model Physics Searches at the Deep Underground Neutrino Experiment," *Eur. Phys. J. C* **81** no. 4, (2021) 322, arXiv:2008.12769 [hep-ex].

[25] **DUNE** Collaboration, B. Abi *et al.*, "Supernova Neutrino Burst Detection with the Deep Underground Neutrino Experiment," arXiv:2008.06647 [hep-ex].

[26] **DUNE** Collaboration, B. Abi *et al.*, "First results on ProtoDUNE-SP liquid argon time projection chamber performance from a beam test at the CERN Neutrino Platform," *JINST* **15** no. 12, (2020) P12004, arXiv:2007.06722 [physics.ins-det].

[27] **JUNO, Daya Bay** Collaboration, A. Abusleme *et al.*, "Optimization of the JUNO liquid scintillator composition using a Daya Bay antineutrino detector," arXiv:2007.00314 [physics.ins-det].

[28] **Daya Bay** Collaboration, F. An *et al.*, "Search For Electron-Antineutrinos Associated With Gravitational-Wave Events GW150914, GW151012, GW151226, GW170104, GW170608, GW170814, and GW170817 at Daya Bay," arXiv:2006.15386 [astro-ph.HE].

[29] **DUNE** Collaboration, B. Abi *et al.*, "Neutrino interaction classification with a convolutional neural network in the DUNE far detector," *Phys. Rev. D* **102** (2020) 092003, arXiv:2006.15052 [physics.ins-det].

[30] **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].

[31] R. Acciarri *et al.*, "Construction of precision wire readout planes for the Short-Baseline Near Detector (SBND)," arXiv:2002.08424 [physics.ins-det].

[32] **DUNE** Collaboration, B. Abi *et al.*, "Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume I Introduction to DUNE," arXiv:2002.02967 [physics.ins-det].

[33] **DUNE** Collaboration, B. Abi *et al.*, "Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume III DUNE Far Detector Technical Coordination," arXiv:2002.03008 [physics.ins-det].

[34] **DUNE** Collaboration, B. Abi *et al.*, "Deep Underground Neutrino Experiment (DUNE), Far Detector Technical Design Report, Volume IV Far Detector Single-phase Technology," arXiv:2002.03010 [physics.ins-det].

[35] **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].

[36] D. Adams *et al.*, "The ProtoDUNE-SP LArTPC Electronics Production, Commissioning, and Performance," *JINST* **15** no. 06, (2020) P06017, arXiv:2002.01782 [physics.ins-det].

[37] **MINOS+, Daya Bay** Collaboration, P. Adamson *et al.*, "Improved Constraints on Sterile Neutrino Mixing from Disappearance Searches in the MINOS, MINOS+, Daya Bay, and Bugey-3 Experiments," arXiv:2002.00301 [hep-ex].

[38] **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].

[39] H. Chen, J. Fried, S. Gao, S. Kettell, V. Radeka, M. Spanu, E. Worcester, M. Worcester, B. Yu, and J. Zhang, "Cold electronics readout system for protoDUNE-SP LAr-TPC," *Nucl. Instrum. Meth. A* **936** (2019) 271–273.

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