

WONSEOK BAE, Ph.D.

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Current Appointment

Postdoctoral Scholar, Northwestern University (USA)

May 13, 2026 – Present

Education

Ph.D. in Physics, University of Texas at Austin (USA)

Advisor: Prof. Karol Lang

Thesis: *Advancing the Liquid-Argon Active Veto for the LEGEND Experiment* 2026

B.S. in Physics, Chung-Ang University (South Korea)

Advisor: Prof. Siyeon Kim 2020

Exchange Student, University of Hawaii at Manoa (USA)

Advisor: Prof. John Learned 2018

Selected Publications

Response of wavelength-shifting and scintillating-wavelength-shifting fibers to ionizing radiation, Wonseok Bae (lead author) et al., *Journal of Instrumentation* **21** P03053 [2] 2026

Optical characterization of wavelength-shifting and scintillating-wavelength-shifting fibers, Wonseok Bae (lead author) et al., *Journal of Instrumentation* **21**, P01027 [1] 2026

First Results on the Search for Lepton Number Violating Neutrinoless Double Beta Decay with the LEGEND-200 Experiment, LEGEND Collaboration, *Phys. Rev. Lett.* **136**, 022701 2026

The Large Enriched Germanium Experiment for Neutrinoless $\beta\beta$ Decay: LEGEND-1000 Preconceptual Design Report, LEGEND Collaboration, [arXiv:2107.11462](#) 2021

Interaction position, time, and energy resolution in organic scintillator bars with dual-ended readout, Melinda Sweany et al. Wonseok Bae, *Nucl. Instrum. Methods Phys. Res. A* **927**:451-462 [4] 2019

Selected Presentations

Invited Talks

LEGEND Experiment and Fiber Studies

Eljen Technology (Global Scintillator Manufacturer), TX, USA 2023, 2024, 2025

Fiber Studies for Next-Generation $0\nu\beta\beta$ Searches in the LEGEND Experiment (HEAP seminar)

University of California, Los Angeles, CA, USA 2025

Conference Talks

Fibers Study to Improve the Liquid Argon Detector for LEGEND-1000 Experiment [5]

APS Meeting, USA & KPS Meeting, South Korea (with Eljen Technology representatives) 2025

Fiber Studies for LEGEND Experiment [6]
Three LEGEND collaboration meetings

2023, 2024, 2025, 2026