

Duncan Hauber

dehauber@syr.edu | +1 (781) 400-3498 | duncanhauber.com

Experience

Experimental HEP Research Group, Syracuse University

Jan. 2026 – Present

Undergraduate Research Assistant, Advisor: Prof. Raymond Mountain

Syracuse, NY

Thermal characterization of filled adhesives for the UP detector replacement of the UT for LHCb Upgrade II

- Conducted literature review and design work for a comparative steady-state thermal conductivity apparatus for filled adhesives under consideration for the UP detector.
- Presented preliminary work at the Syracuse University College of Arts and Sciences Research Festival (April 2026).

LIGO Research Group, Syracuse University

Sept. 2024 – Dec. 2024

Undergraduate Research Assistant, Advisor: Prof. Craig Cahillane

Syracuse, NY

Participation in group research on gravitational-wave detection

- Participated in beam locking exercises on a tabletop interferometer.
- Assisted in replacing a vacuum pump on an optical cavity; documented procedure in group e-log.
- Attended weekly group meetings; developed foundational knowledge of LIGO instrumentation and interferometric measurement techniques.

Experimental HEP Research Group, Syracuse University

May 2024 – Aug. 2024

Undergraduate Research Assistant, Advisor: Prof. Raymond Mountain

Syracuse, NY

Local monitoring of the LHCb Upstream Tracker during Run 3 operations

- Held a 40 hour/week local Syracuse LHCb shift, monitored UT detector operation and assessed performance, supplementing 1-2 hour shifts covered by graduate students in the Syracuse LHCb group.
- Investigated systematics of electronics readout errors, and documented module inefficiencies.

Physics Department, Syracuse University

Jan. 2023 – May 2023, Aug. 2024 – Dec. 2024

Undergraduate Peer Coach for Physics and Astronomy Courses

Syracuse, NY

Guided fellow students to complete assigned lab activities alongside graduate TAs

- Coached for Intro. to Astronomy Lab and Physics I for Engineers Lab

Education

Syracuse University

Jul. 2022 – Dec. 2026

Bachelor of Science

Syracuse, NY

- **Majors:** Physics (B.S.), Mathematics (B.A.), Astronomy (B.A.)
- **Minor:** Psychology
- **CGPA:** 3.72/4.00
- **Physics Coursework:** Astrophysical Fluid Dynamics, Stars and Compact Objects, Computational Physics, Experimental Physics, Quantum Mechanics, Classical Mechanics, E&M, Thermo. & Stat. Mech.
- **Math Coursework:** PDEs & Fourier Series, Linear Algebra (matrix-computational), Real Analysis, Numerical Methods
- **In Progress** (Fall 2026): *General Relativity, Nuclear Physics, Cosmology, Proof-based Linear Algebra, High Energy Particle Physics (PHY 771)*

Honors

Jay Zemel Fellowship — Syracuse Physics, Summer 2026

Departmental fellowship supporting undergraduate summer research in physics.

Invest in Success Scholarship — Syracuse University, Fall 2022

Awarded to students achieving 3.75+ GPA with 15+ credits in their first semester.

Dean's List — Syracuse University, Every semester of enrollment (Fall 2022 - Present).

Presentations

Hauber, D., Savkovic, F., & Mountain, R. (April 2026) *Thermal and Mechanical Properties of Loaded Adhesives for Application in High Energy Physics Experiments*. Poster presented at the Syracuse University College of Arts and Sciences Research Festival, Syracuse, NY.

Technical Skills

Python (NumPy, Matplotlib), C/C++ (coursework-level), LaTeX

Professional Memberships

American Physical Society

Society of Physics Students