Anthony Lestone

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Education

Texas A&M University Expected August 2024

Bachelor of Science in Physics with Minors in Computer Science and Mathematics – 3.586 GPA *College Station, Texas*

Experience

Undergraduate Researcher May 2023 – present

Texas A&M Cyclotron Institute *College Station, Texas*

- Designed new voltage signal analysis algorithms, giving rise to a substantial increase in particle identification ability over previous techniques
- Tested a new experimental technique to differentiate particles in a detector, revealing the detector's inability to distinguish between particles at desired energies
- Worked in the lab on silicon detector testing, energy calibration, vacuum chamber operation, and data acquisition
- Created C++ simulations to predict the viability of different experimental setups

Undergraduate Intern June 2021 – Aug. 2021, June 2022 – Aug. 2022

Los Alamos National Laboratory *Los Alamos, New Mexico*

- Developed particle physics simulations featured in a research publication within Physical Review Letters, the most-cited journal in the field of physics
- Processed sizable physics data sets from CERN's Large Hadron Collider by writing scripts to analyze files with 10,000,000+ data points
- Designed a Geant4 simulation to model the propagation and decay of subatomic particles in Earth's atmosphere
- Worked in the laboratory on detector assembly and construction of a water-based electronics cooling system

Talks

Pulse Shape Discrimination Using a Regular Silicon Detector Nov. 2023

Texas A&M Cyclotron Institute Brown Bag Luncheon

Constraining the B quark hadronization mechanism July 2022

Los Alamos National Laboratory Student Symposium

Analysis of D meson decays at LHCb July 2021

Los Alamos National Laboratory Student Symposium

Technical Skills

Languages: C++, Python, Java
Developer Tools: Git, Vim, VSCode
Physics Software: Geant4, ROOT, PYTHIA

Honors

Aggies Invent Oct. 2021

- Collaborated with 4 other team members in a 48 hour competition to design a satellite cryocooler, placing 2nd out of 6 teams
- Created a thermodynamics simulation to estimate the power consumption of different satellite designs, demonstrating that the final design could stay within a prescribed power budget of 28 Watts

Volunteering

Physics Festival Volunteer May 2022, May 2023

- Supervised several physics demonstrations at the Texas A&M Physics and Engineering Festival
- Engaged with community attendees and explained physics concepts to children and adults

Science Bowl Mentor Aug. 2021 - present

- Assist in preparing a team of 5 high school students for competition by reading practice questions, assisting in studying, and providing learning resources