Deacon Carreon

UC Berkeley Physics & Astrophysics Major

Aspiring scientist working towards degrees in Physics and Astrophysics. Researcher with computational and hands-on experience working at the Space Sciences Laboratory, and detail-oriented writer in the Berkeley Scientific Journal. Able to grasp complex concepts, communicate clearly, and pass down knowledge to others.

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Education

August 2024 - Present **University of California, Berkeley**: Physics & Astrophysics B.A
GPA: 3.772/4.0
Coursework:

- Introduction to Astrophysics
- Introduction to Experimental Physics
- Introduction to Python
- Reading, Composition, and Research

Research

Space Sciences Laboratory URAP Fall 2025

– Worked with Aerospace Engineer Travis Curtis on a project that analyzed data on the radioactive noise of an onsite Americium-241 source by using the TimePix3 detector. The goal was to create code capable of processing the data to reproduce an image of the original source.

– Created literature digest pertaining to how the detector works, as well as what the project's objectives and outcomes might look like.

– Operated Pixet software, which images the radioactive noise events from the source with the detector, and directly handled the Americium-241 source.

Programming

Physics 5BL Fall 2025

– Used the topics learned from the python decal to conduct the data analysis of my class' labs more efficiently, which also included using LaTeX for each lab report, and Jupyter Notebook for data analysis.

Astronomy 98 (Python Decal) Spring 2025

– Learned Python concepts (NumPy, Pandas, Matplotlib), the terminal, and Github. Modeled the Earth's tidal waves with physics and gravitation, with a partner.

Other Academic Projects

Berkeley Scientific Journal: R&B Writer Fall 2025 - Present

Planetary Defense II: Protecting Space and Earth from Our Own Satellites

- Wrote on the potential problems that can arise with the growing overabundance of satellite networks around Earth.
- Concluded that the impacts on the atmosphere from satellites completely burning up, releasing their metals and creating alumina and aerosols, is unknown.

Planetary Defense I: How Humanity is Trying to Avoid The Fate of The Dinosaurs

- Wrote on the history of asteroid impacts both within and before recorded history and the importance of planetary defense.
- Discussed missions that work to enhance planetary defense, such as NASA's and the ESA's asteroid trackers, and the 2022 NASA DART Mission.

Teaching/Mentoring

Mathematical and Physical Sciences (MPS) Scholars Mentor Fall 2025 - Present

- Currently mentoring two first-year undergraduates about the resources and knowledge that they need to succeed, and sharing with them how to look for research, internships, and career advice.
- Conducted informational interviews with a grad mentor on grad school expectations, and with alumni mentor Dr. Craig Hetherington to learn about career paths and possibilities after obtaining a Ph.D.

Talks/Presentations

The Past, Present, and Future of Antimatter 2025 February 6

- Society of Physics Students Undergraduate Seminar
- Presented on how antimatter has always been a substance of interest in the universe, especially because of the lack of antimatter in the universe.
- Looked into why, despite being mathematically plausible, our universe has come to be dominated by regular matter instead.
- Discussed the challenges with creating our own antimatter for real-world applications.