

**Lamont-Doherty Earth Observatory of Columbia University**  
**Department of Earth and Environmental Sciences**

Sponsored in part as an REU Site by the National Science Foundation. Half the students accepted for the REU Site will be from community colleges.

Starred research projects\*\* are supported by U.S. scientific ocean drilling programs. At least two out of the four students supported by these projects are required to be from community colleges and/or first generation college students.

**Summer Internship Program for Undergraduates (May 27th-August 6th, 2026)**

*Theme: Interdisciplinary Cutting-Edge Research through the Analysis of Global Data*

The Lamont-Doherty Summer Intern Program offers the chance to experience cutting-edge scientific research as an undergraduate. **The program is open to US citizens or permanent residents** who have completed their junior or sophomore year in college or community college with majors in earth science, environmental science, chemistry, biology, physics, mathematics, or engineering.

**Graduating seniors are not eligible. DACA students and international students attending colleges and universities located in the United States are eligible for the four projects that are starred (\*\*), which are sponsored by U.S. scientific ocean drilling programs.** Students from community colleges and first-generation college students are encouraged to apply.

Applicants should have an interest in conducting research in earth, ocean or atmospheric science. One previous earth, ocean, or atmospheric science course is desirable if they are available to the student. All students should have at least one year of calculus (high school or college) and/or good grades in college level mathematics. Students choosing research in geochemistry and chemical oceanography should have at least two semesters of college-level chemistry. Students choosing research in marine biology should have at least two semesters of college-level biology. Students choosing research in geophysics, physical oceanography or atmospheric science should have at least three semesters of college-level physics.

The Marine Geoscience Data System group at Lamont provides a freely available tool called GeoMapApp that allows the exploration and visualization of global data sets ([www.geomapapp.org](http://www.geomapapp.org)). With GeoMapApp, users can create custom maps and grids, import their own data sets and grids, and explore and visualize a wide range of global data sets. These include a multi-resolution digital elevation model of the oceans and continents; plate tectonic information; undersea feature names; shipboard topography, gravity and magnetics data; earthquake catalogues; deep sea core data; Alvin submersible photos around hydrothermal vents; rock sample geochemistry; satellite-derived gravity and geoid grids; seismic reflection profiles, and more. GeoMapApp is written in Java and works on any type of computer. All interns will be instructed in the use of GeoMapApp during the second week of the intern program. Interns will be encouraged to use GeoMapApp during their research projects, as well as after they have returned to their undergraduate institutions. However, both the

student and the supervisor will design the research program, and therefore individual projects may contain variable amounts of data collection and data analysis.

The following members of the Lamont research staff will act as research mentors:

**Dallas Abbott, Ben Bostick.** Expertise: **Marine Geology and Geophysics, Geochemistry, Extraterrestrial Impacts.** Research Project: How Well Can We Date and Confirm Submarine Impact Crater Candidates and Resulting Tsunami Layers?

**\*\*Apollonia Arellano, Jerry McManus.** Expertise: **Paleoclimate, Paleoceanography.** Research Project: How Has Atlantic Deep Ocean Circulation Changed in the Last 50,000 Years?

**Natalie Boelman, Kevin Griffin, Duncan Menge.** Expertise: **Effects of Climate Change on Plants and Animals and Interactions Among Them.** Research Project: How Does Variability in Environmental Conditions Influence the Form and Function of Arctic Tundra Ecosystems?

**Austin Chadwick.** Expertise: **River Dynamics, Fluvial Geomorphology, Climate-Change impacts, Natural Hazards.** Research Project: How Will Riverbank Erosion Hazards Respond to Climate and Land-Use Changes?

**\*\*Jenna Everard, Stephen Cox, Sidney Hemming.** Expertise: **Noble Gas Geochronology, Tectonics, Subduction Zones, Scientific Ocean Drilling.** Research Project: When and Why Have Earthquakes Propagated to the Seafloor at the Japan Trench?

**\*\*Kelly Fenton-Samuels, Sidney Hemming, Trevor Williams, Claire Jasper.** Expertise: **Paleoclimate, Ice-sheet History, Paleoceanography, Geochronology.** Research Project: Can We Assess the Abundance of Ice-Rafted Particles Using X-Ray Imaging and Sedimentology?

**Joachim Goes, Jinghui Wu.** Expertise: **Biological Oceanography.** Research Project: What are the Drivers of Harmful Algal Blooms in Long Island Sound?

**Philip C. LaPorta, Margaret Brewer-LaPorta.** Expertise: **Tectonic Stratigrapher, Sedimentologist, Archaeologist.** Research Project: Does the Leithsville Formation Preserve Evidence for Mechanisms of Silicification?

**Christine McCarthy, Einat Lev.** Expertise: **Rock Deformation, Planetary Science and Volcanology.** Research Project: What Is the Rheology of a Three-Phase Magma?

**\*\*Jerry McManus.** Expertise: **Paleoceanography, Geochemistry, Sedimentology, Micropaleontology.** Research Project: How Did Past Ice Age Cycles Affect the Climate In the Pacific Ocean?

**William Menke, Andrew Lloyd.** Expertise: **Seismology, Geodynamics, Geotomography.** Research Project: Is the Lithosphere Beneath Eastern North America Falling Apart?

**Kate Scholz, Einat Lev.** Expertise: **Volcanology, Magma Transport, Fluid Mechanics Experiments, Numerical Models.** Research Project: Why and When Do Dikes Become Sills in Extensional Tectonic Settings?

**Susanne Straub.** Expertise: **Volcanology, Petrology.** Research Project: How Well Can We Track Melt Formation in the Earth's Mantle?

**Renata Wentzcovitch, Göran Ekström, Jacqueline Austermann, Kui Ren.** Expertise: **Computational Mineral Physics, Quantum Materials Modeling, High-Pressure Geophysics, Machine-Learning.** Research Project: What Is the Composition of the Bulk Silicate Earth? (Tuskegee students only)

**Yushu Xia Alexandra Crookshanks, Jiaming Duan.** Expertise: **Environmental Data Science, Soil Health Assessment, Remote Sensing, Ecosystem Modeling.** Research Project: Can In-Situ Measurements and Models Inform the Coupling Between Forest Carbon and Water Dynamics?

**Program Information:**

**STIPEND:** Students will receive a stipend of \$7000 for this 10-week program. Students who choose to have their own living arrangements will have \$1000 added to their stipend. The ten weeks extends until Thursday August 6<sup>th</sup>, when final papers are due.

**HOUSING and TRAVEL BENEFITS:** The student will receive free housing in a college dorm room. Students will also receive free bus transportation between the college campus and Lamont. Students who are traveling to New York for this internship from more than 200 miles away will be reimbursed for a round-trip supersaver fare.

**APPLICATION DEADLINE:** Application form must be submitted by **February 18th, 2026.**

**There is an online application form (ETAP). Go to our webpage or it is posted at:**

<https://etap.nsf.gov/award/7344/opportunity/11768>

**The online application form asks for the following files:**

- Resume with description of scientific skills.
- A statement of interest. This statement can include a description of a particular research project that the student wishes to undertake or it can be a more general statement of the three research projects that interest the student most. We recognize that students with no prior research experience may have difficulty formulating a research project and we will not penalize students who do not submit a detailed project description. The goal of our program is to teach students about the research process and we encourage students with no prior research experience to apply. The student should also include a statement of the characteristics of a good scientist and the availability of undergraduate research opportunities at their home institution.
- Two letters of recommendation from your professors. Additional letters are not required or desired. They will not be accepted by the online application system.

- Scanned transcript(s). Transcripts need not be official but must be legible and in English. If you have more than one undergraduate transcript, combine them into a single document for upload.
- Also, see the file on our webpage, “Tips for applying on ETAP.”

**If transcripts are not available to append to the online application form, send scanned transcript(s) by email to:**

**Laisa Sevilla  
Summer Internship Program  
Lamont-Doherty Earth Observatory  
Palisades, New York 10964  
Email: [lsevilla@ldeo.columbia.edu](mailto:lsevilla@ldeo.columbia.edu)**

For more information about the program, please visit the following webpage:

<https://lamont.columbia.edu/education-outreach/student-summer-opportunities-intern-programs>.

Decisions for all but the waiting list will be made on or before April 1st, 2026. The National Science Foundation is designating this program as an NSF REU Site for the summer of 2026. The research projects and advisors change annually. The yearly posting of new projects is in mid-January. \*\$750 cap on travel reimbursement.