PURDUE UNIVERSITY | Department of Earth, Atmospheric, and Planetary Sciences

EAPS WEEKLY NEWSLETTER

September 02, 2025

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EAPS MEETINGS & EVENTS

PURDUE REGISTRAR CALENDARS

EAPS SEMINARS AND EVENTS CALENDAR

EAPS K-12 OUTREACH CALENDAR OF EVENTS

REPORT YOUR OUTREACH AND ENGAGEMENT ACTIVITIES

CONGRATS, KUDOS, COOL STUFF, AND THUMBS UP!

- Congratulations to Jennifer Nelson for being elected as the North-Central Regional Delegate to the Association for Women Geoscientists!
- Third-year PhD student Wenbo Zhan presented a poster on his research on dating river terraces in southern California at the 2025 Gordon Research Conference on Geochronology, held in Maine this past August. Wenbo's poster and presentation won the Best Poster award for the conference! Congratulations, Wenbo!!!
- The 2025 EAPS 1-Minute Research Blitz winners are Emma Kostecki for the Graduate Student Category and Briony Horgan for the Faculty Category! Honorable mentions go to Kaustub P Anand, Emily Apel, and Melanie Beasley!

NEWS/OPPORTUNITIES AT PURDUE

EAPS SEMINAR

Thursday, September 4th, 3:30 pm in HAMP 1252. John Kemeny is an associate professor at the University of Arizona. Hosted by Elita Li. Dr. Kemeny's talk is titled *"Innovative Monitoring and Characterization Technologies (with the help of AI) for Combatting Geologic/Hydrologic Hazards Associated with Climate Change"*

EAPS UNDERGRAD STUDENT RESEARCH OPPORTUNITIES

If you are interested in an EAPS undergraduate research opportunity, click here for more information.

EAPS GRAD STUDENT RESEARCH OPPORTUNITIES

If you are interested in an EAPS grad research opportunity, click here for more information.

KICKOFF: LEADERSHIP FOR SPACE CAREERS & ASTRONAUT SCHOLARS AWARDS EVENT

Thursday, September 4, 2025, 5:30-6:30 PM. We welcome guests NASA astronaut Anna Fisher, M.D., and Sheridan Moore, Ph.D., Senior Technical Consultant at Esri. Purdue's Astronaut Scholars will also be presented with their awards.

Registration is free but required. Please RSVP before September 4th to secure your seat!

Launching Interdisciplinary Endeavors Tickets, Thu, Sep 4, 2025 at 5:30 PM | Eventbrite

WESTWOOD LECTURE SERIES with ROGER WIENS and MICHELLE THOMPSON

Purdue President Mung Chiang has announced the fall lineup for the **Westwood Lecture Series**, which provides an opportunity for university faculty to interact with colleagues on scholarly work from a wide range of fields. Each lecture will take place from 4:30-5:30 p.m. at Westwood, the Purdue president's residence.

Roger Wiens will be speaking on **September 12** and will present his groundbreaking exploration of Mars and its habitability with instruments that he developed for two generations of NASA rovers.

Michelle Thompson will be speaking on **November 11** and will present findings from the analysis of asteroid Bennu samples returned by NASA's OSIRIS-REx mission.

ClimART COMPETITION FOR PURDUE EAPS (and COLLABORATORS)

ClimART is a friendly climate and art competition for Purdue EAPS (and collaborators). This event celebrates both the art within your research and the science-inspired art you create for fun! We believe art is a powerful way to say "Hey, this is me" even on paper.
Event coming **September 2025 — exact date TBA**.

COMMUNITY CONNECTIONS

This event will be on **September 18 from 6-8 pm** in the Black and Gold gyms in the CoRec and is an event to help welcome new and returning Boilermakers to campus.
EAPS has had a presence for the last several years, and we are looking for up to four people to help lead our department's presence.
Let Ali Bramson know if you'd like to help out.

FALL UNDERGRADUATE RESEARCH ROUNDTABLE

Wednesday, September 24, from 2-5 pm (virtually).
The Research Roundtable is a research "job fair" that invites research mentors and programs seeking students to host a booth where students seeking opportunities can learn more about what is available. Register today for a virtual booth to receive updates on how to access the site and connect with students interested in research.

19TH ANNUAL STUDENT-LED ECOLOGICAL SCIENCES AND ENGINEERING (ESE) SYMPOSIUM

The theme of **Ripple Effect: Act Locally, Inspire Globally** will be taking place **September 26-27, 2025.** Our two-day event will focus on tangible skills building and local action, sparking a ripple of climate optimism within and beyond the Purdue community. Our schedule will feature a Graphical Abstract Workshop with a lunch and learn, a Creative Works Competition, Brain Blast Trivia Night, and GrowLocal volunteering event.

2025 FALL UNDERGRADUATE RESEARCH EXPO

November 17-21 (See link above for more details)
The Fall Expo hosts undergraduate researchers to showcase the scholarly work and creative endeavors through posters, talks, and/or virtual presentations! The application site will open early September with **abstracts due October 16**. Please consider inviting students you mentor to present.

FEDERAL FUNDING UPDATES

This site provides important information and updates from federal agencies that impact the Purdue University research enterprise.
https://government-transition.research.purdue.edu/

UNIVERSITY OF SCOUTING - GEOLOGY/OCEANOGRAPHY MERIT BADGE

On **Saturday, 6 December**, Scouting America (formerly Boy Scouts of America) will host a University of Scouting event on Purdue's campus. They are looking for volunteers who can teach the geology or oceanography merit badges (see attached). Courses can run 9am-12pm or 1-4pm. If you are interested, please reach out to Byron Haverstick, Chief Operating Officer of the Sagamore Council, at Byron.haverstick@scouting.org. He will work with you on supplies, pre-work from the scouts, background checks, etc.

DEFENSE CIVILIAN TRAINING CORPS - PURDUE UNIVERSITY

Purdue's Defense Civilian Training Corps (DCTC) is a new program that will build civilian careers in the Department of Defense relating to acquisition, digital technologies, critical technologies, science, engineering, and finance and more. The Defense Civilian Training Corps is a scholarship-for-civilian service award.

STREAMLINE CLIMATE & ATMOSPHERIC DATA ACCESS AT PURDUE

To better facilitate the atmospheric and climate science research within the Purdue community, RCAC is assessing the interest and current usage of key datasets and models. Our goal is to continue to grow centralized, ready-to-use data repository and pre-installed models in our cluster environment. This will reduce redundancy, streamline access, and optimize both time and resources across research groups. Please take the time to put your input in the survey link below:
Https://purdue.ca1.qualtrics.com/jfe/form/sv_3k91qlgcvyrcgwu

51 PEGASI B FELLOWSHIP

Purdue University is proud to be a host institution for the **Heising-Simons Foundation 51 Pegasi b Fellowship,** and we have 17 faculty mentors from the College of Science.
The 51 Pegasi b Fellowship provides postdoctoral scientists with the opportunity to conduct

theoretical, observational, and experimental research in planetary astronomy.
The 51 Pegasi b 2025/2026 application period is now open. Applicants will be notified about
The status of their applications by mid-February.
Interested candidates are asked to submit an online application here.
Check out our new website on the EAPS webpage here:
https://www.eaps.purdue.edu/research/51pegbfellowship.html
You can also email Alexandria Johnson, who is Purdue's institutional contact.

SCIENTIFIC MACHINE LEARNING: THEORY, ALGORITHMS, AND APPLICATIONS

On **September 27-28, 2025,** a two-day workshop will be hosted by the Center for Computational and Applied Mathematics (CCAM) at DSAI, Purdue West Lafayette campus. More information about the workshop can be found on the workshop website. This event is supported by ONR and CCAM.

OUTREACH NEWS

If you or your group has worked with or helped with an activity for K-12 students or teachers, please fill out the departmental outreach activity form.

Game night is the third Friday of each month.
Time: 6:00 PM to 9:00 PM.
Location: HAMP 2244

Ongoing:

- Purdue University Kids STEM Degree
- Science From the Expert

See all of our videos on the Superheroes of Science YouTube channel:
https://www.youtube.com/c/SuperheroesofScience

Social sites:
Instagram
Facebook Superheroes of Science

PUBLICATIONS

- Folarin, H., Hajian, N., Hill, K., & Laskin, A. (2025). Photodegradation-Driven Microparticle Release from Commercial Plastic Water Bottles. *Soft Matter*. https://doi.org/10.1039/d5sm00469a
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- Fang, Z., Lai, A., Windwer, E., Pardo, M., Li, C., Chandran, A. T., Laskin, A., & Rudich, Y. (2025). Investigating the oxidative potential and in vitro toxicity of ambient Water-Soluble PM10 in an eastern Mediterranean site. *ACS ES&T Air*, *2*(7), 1326–1338. https://doi.org/10.1021/acsestair.5c00085
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- **Pérez Cortés, S.L.**, **A.M. Bramson**, **C.M. Sowinski**, M. Day (2025) Scour pits in the Medusae Fossae Formation and Olympus Mons Region on Mars. Journal of Geophysical Research: Planets, 130, 7, e2024JE008664, https://doi.org/10.1029/2024JE008664.
- **Hamill, C.D. , A.V. Johnson,** M. Lodge, P. Gao, **R. Nag,** N. Batalha, D.A. Christie, and H.R. Wakeford (2025): The Effects of Cuboid Particle Scattering on Reflected Light Phase Curves: Insights from Laboratory Data and Theory. *ApJ* **987** 176. Doi: 10.3847/1538-4357/add7cf
- **Liu, Z., Wang**, L. Blocking diversity causes distinct roles of diabatic heating in the Northern Hemisphere. *Nat Commun* **16**, 5613 (2025). https://doi.org/10.1038/s41467-025-60811-4
- **Tremblay, M.M.**, Fayon, A.K., **Guo, H.**, Zeitler, P.K., and Idleman, B.D., 2025, Deformation modulates helium diffusion behaviour in apatite. Geochemical Perspective Letters. doi: 10.7185/geochemlet.2523
- **Mijjum, M.**, and **Tremblay, M.M.**, 2025, Helium Diffusion Kinetics in Enstatite, Kamacite, and Albite, With Implications for the Cosmic Ray Exposure Ages of Enstatite (E) Chondrites. ACS Earth and Space Chemistry. doi: 10.1021/acsearthspacechem.5c00112
- S.A. Connell, D.M. Applin, E.A. Cloutis, J.T. Poitras, D.T. Dixon, S.A. Mertzman, P. Mann, C. Royer, T. Fornaro, A. Broz, R.C. Wiens, "Spectral reflectance (0.35–2.50 µm) properties of minerals and organic-bearing compounds

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- Rapp, C. N., Wolf, M. J., Zhang, Y., Zawadowicz, M. A., Dooley, K., Biller, S. J., … Cziczo, D. J. (2025, June 4). "Ice-nucleating properties of glassy organic and organosulfate aerosol." *Atmospheric Chemistry and Physics*, *25*(11), 5519–5536. https://doi.org/10.5194/acp-25-5519-2025
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- **Yuan, Y.**, **Zhuang, Q.**, Zhao, B., & Shurpali, N. (2025). Impacts of permafrost degradation on N2O emissions from natural terrestrial ecosystems in northern high latitudes: A process-based biogeochemistry model analysis. Global Biogeochemical Cycles, 39, e2024GB008439. https://doi.org/10.1029/2024GB008439
- Andersen, J.L., Lifton, N.A., Linge, H., Stuart, F., Olsen, J., Pedersen, V.K., in press, Ice-burial history and early Holocene thinning of the Scandinavian Ice Sheet at Gaustatoppen, southern Norway, Quaternary Science Reviews.
- Kelley, S., Doughty, A.M., Lifton, N., Pendleton, S., O'Brien, C., Warren, G., in press, Reconstructing the late Pleistocene glacial history of the Cairngorm Mountains, Scotland, using paired cosmogenic 10Be and 14C, Journal of Quaternary Science.
- Ćuk, M., Anand, K. P., & Minton, D. A. (2025). Two possible orbital histories of Phobos. *The Planetary Science Journal*, *6*(4), 89. https://doi.org/10.3847/psj/adc1ba
- **S Wakita**, **B C Johnson**, J M Soderblom, J K Steckloff, **A V Johnson**, C D Neish, J Shah, P Corlies (2025) Impacts Into Titan's Methane- Clathrate Crust as a Source of Atmospheric Methane. *JGR Planets*, 130, 4. https://doi.org/10.1029/2024JE008624
- **Laferriere, K.L., A.M. Bramson, A. Gleason (2025)** Quantities of Ballistically Hopping Water Molecules on the Moon: Consistent With Exospheric Hydration Observations. *JGR-Planets*, 130, 4, e2024JE008628**. https://doi.org/10.1029/2024JE008628**
- **Petrini, E.Z.** and **M.M. Sori** (2025), Layered remnant deposits in Hellas Planitia, Mars as the remains of ancient ice mounds, Icarus, 116604. https://doi.org/10.1016/j.icarus.2025.116604
- **Liu, X.**, Griffin, A., Komurcu, M., & **Huber, M**. (2025). Importance of longwave radiative forcing by icy clouds in maintaining miocene high-latitude warmth. *Geophysical Research Letters*, 52, e2024GL111831. https://doi.org/10.1029/2024GL111831
- **Vannier H**, Redfield S, Wood B E, Mueller H R, Linsky J L, Frisch P (2025). Mapping the Local Interstellar Medium: Using Hubble to Look Back at the ISM Along the Sun's Historical Trajectory. The Astrophysical Journal, 981, 2, doi:10.3847/1538-4357/adb033
- **Chen, S.**, **Liu, L.**, Ma, Y., **Zhuang, Q.**, & Shurpali, N. J. (2024). Quantifying global wetland methane emissions with in situ methane flux data and machine learning approaches. Earth's Future, 12, e2023EF004330. **https://doi.org/10.1029/2023EF004330**. **PDF**

MEETINGS/EXPOS/ OPPORTUNITIES OUTSIDE OF PURDUE

WESTERN KENTUCKY UNIVERSITY SEEKING FOUR M.S. GRAD STUDENTS

The Department of Earth, Environmental, and Atmospheric Sciences (EEAS) at Western Kentucky University (WKU) is inviting applications for four M.S.-level graduate students to start **August 2025**. Students will work as a part of the state-wide CLIMBS (https://kynsfepscor.uky.edu/climbs/) initiative, a 5-year, $20 million National Science Foundation EPSCoR grant to advance research in climate resilience for Kentucky. The successful applicants will be expected to contribute to one of the following projects: (a) Identification and analysis of the synoptic-scale atmospheric environments associated with high-impact weather; (b) Dynamical downscaling of future 21st century climate projections for the Mid-South region of the U.S.; (3) Comprehensive assessment of historical state-wide weather and climate-related threats and hazards; and (4) An historical, wide-ranging study of casualties associated with high-impact weather and climate events.

These positions include a 12-month stipend and tuition. Applicants should have a B.S. degree in the atmospheric, environmental, or geographic sciences, or a closely related discipline. Prior experience in computer programming (e.g., Python, FORTRAN, NCL, Linux shell scripting) is necessary, and experience in application to climatic processes, numerical weather simulation, and/or AI-driven data analytics is preferred. Interested candidates are encouraged to contact Dr. Jerry Brotzge (<Jerald.brotzge@wku.edu>) for more information.

MASTER OF ARTS IN TEACHING EARTH SCIENCE RESIDENCY PROGRAM

The Master of Arts in Teaching Earth Science Residency Program in the Richard Gilder Graduate School at the American Museum of Natural History in New York City is **looking for graduates with Earth and space science backgrounds** (geology, mineralogy, paleontology, oceanography, astronomy, environmental geology, and more) who want to make a difference in the world of STEM education. This teaching fellowship combines coursework, mentoring, and real-world experience to prepare Earth and space science graduates for **rewarding careers as culturally responsive middle and high school teachers.**

All degree candidates will receive **free tuition, books, and a $40,000 stipend** towards the cost of living. In return, candidates commit to teaching in a high-needs school for three years.

With a sole focus on preparing new Earth science teachers, the program is a full-time, 15-month Master's degree program that takes place at the Museum and in urban partner schools.

We are currently accepting applicants for the class that will begin in June 2025. Prospective students are encouraged to attend an Information Session or to contact us for more information.

You can also visit the program website to learn more and/or join our mailing list (make sure to click MAT for Earth Science Grads). For questions, you can contact the program office directly at mat@amnh.org or (212) 313-7464.

DOE'S OFFICE OF SCIENCE IS NOW ACCEPTING APPLICATIONS FOR GRADUATE STUDENT RESEARCH AWARDS

The U.S. Department of Energy's (DOE) Office of Science is pleased to announce that the Office of Science Graduate Student Research (SCGSR) program is now accepting applications for the 2025 solicitation 2 cycle. **Applications are due on Wednesday, November 5, 2025, at 5:00 p.m. ET.**

SCGSR application assistance workshops will be held on September 11, 2025, 2:00 p.m.–3:30 p.m. ET (register on Zoom for the first workshop) and October 9, 2025, 2:00 p.m.–4:30 p.m. ET (register on Zoom for the second workshop).

More information on the SCGSR program can be found by visiting the SCGSR program website, by emailing the SCGSR team.

UCAR STUDENT OPPORTUNITIES WEBSITE

Check the opportunities website for opportunities at UCAR.

POST-DOC OPPORTUNITY - AIR FORCE SCIENCE & TECHNOLOGY FELLOWSHIPS

The National Academies of Sciences, Engineering, and Medicine administers postdoctoral and senior research awards at the U.S. Air Force Research Laboratory (AFRL), the U.S. Air Force Institute of Technology (AFIT), and the U.S. Air Force Academy (USAFA) under the Air Force Science & Technology Fellowship Program (AF STFP).

Seeking highly qualified candidates who are U.S. citizens and hold, or anticipate earning, a doctorate in a variety of fields of science or engineering.

Application deadline dates (four annual review cycles): February 1, May 1, August 1, November 1

Awardees have the opportunity to:

- Conduct independent research in an area compatible with the interests of the Air Force laboratories
- Devote full-time effort to research and publication
- Access the excellent and often unique Air Force research facilities
- Collaborate with leading scientists and engineers
- Awardee benefits:
- Base stipend starting at $76,542; may be higher based on experience
- Health insurance (including dental/vision), relocation benefits, and a professional travel allowance

Applicants should contact prospective AFRL, AFIT and USAFA Research Adviser(s) at the lab(s) prior to the application deadline to discuss their research interests and funding opportunities.

For detailed program information, to search for AFRL, AFIT, and USAFA Research Opportunities, and to contact prospective Research Adviser(s), visit www.nas.edu/afstfp.

AWG BRUNTON AWARD AND BRUNTON FIELD PROJECT AWARD

The AWG Brunton Award and Brunton Field Project Award promote the future of field mapping and data acquisition for the upcoming generation of people whose gender identity has been historically underrepresented in the geosciences. Applicants should have a passion for and exceptional experience with field work, including internships, field camp, coursework with a field-based research component, or research.

The AWG Brunton Award has been active for >20 years and provides Brunton compasses to 1–2 awardees each year. The AWG Brunton Field Project Award started in 2022 and awards a Brunton compass and up to $1000 to support field activities to each of 1–2 awardees each year. Learn more here. Deadline for entry is Dec. 15th of each year.

RECRUITMENT FOR CoCoRaHS

The Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) is looking for more weather observers throughout Indiana and beyond. By participating in CoCoRaHS, farmers contribute valuable data that supports better agricultural decisions, weather-related products, and faster recovery during severe weather events. The application for U.S. participants is at https://www.cocorahs.org/application.aspx

NWA 50TH ANNUAL MEETING

September 6-10, 2025
Huntsville, AL
Meeting info

FROM CHEMISTRY TO LIFE: CLUES FROM EARTH EXPERIMENTS AND SPACE

Thursday, September 18, 2025
Virtual Meeting Info

WORKSHOP ON BENNU AND RYUGU: SAMPLES FROM THE EARLY SOLAR SYSTEM

October 7-9, 2025
Houston, TX / Virtual
Meeting info

AMERICAN GEOPHYSICAL UNION (AGU) 2025

December 15-19, 2025
New Orleans, LA
Meeting info

SECOND WORKSHOP ON ICES IN THE SOLAR SYSTEM

January 5-7, 2026
Montreal, Canada
Meeting info

106TH AMS ANNUAL MEETING

January 25-29, 2026
Houston, TX / Virtual
Meeting info

POSITIONS AVAILABLE- CAREER OPPORTUNITIES

- **Assistant Professor of Meteorology-Aviation –** Tenure-Track University of Oklahoma, Norman, OK
- **Future Faculty in the Physical Sciences (FFPS) Fellowship** – Princeton
- **Multiple Positions with Enviroforensics**
- **Meteorology and Atmospheric Science – multiple positions from various companies**
- **AGI Geoscience Job Center – multiple positions**
- **Gradient Corp – multiple opportunities.** contact Qian Zhang
- **National Weather Service – multiple opportunities**

NEWSLETTER INFO

IMPORTANT NOTICE ABOUT THIS NEWSLETTER

This newsletter is used as the primary information source for current and upcoming events, announcements, awards, grant opportunities, and other happenings in our department and around campus. Active links to additional information will be provided as needed. Material for inclusion in the newsletter should be submitted to David Siple **by 5:00 pm on Thursday of each week for inclusion in the Monday issue.**
For answers to common technology questions and the latest updates from the EAPS Technology Support staff, click here. As an additional resource for information about departmental events, seminars, etc., see our departmental calendar.