Los Alamos Space Weather Summer School June 5 - July 28, 2023

Los Alamos National Laboratory, Los Alamos New Mexico
http://swx-school.lanl.gov

The Los Alamos Space Weather Summer School is accepting applications for its 2023 session. Sponsored by the Center for Space and Earth Sciences at Los Alamos National Laboratory (LANL), this summer school brings together top space science graduate students and LANL space scientists to work on challenging space weather research. Students receive a prestigious Vela Fellowship (worth $13,000 to cover travel and living expenses), technical training, and opportunities for professional development.

Lectures

The lectures will encompass three main themes. The first part will be an overview of basic space physics concepts geared towards understanding how the magnetosphere works and how it is driven. This will include the use of modeling tools to explore the same concepts in a more quantitative way, exposing the strengths and weaknesses of available models. The second part of the lectures will bring these concepts together to explore how new space missions could be devised to help resolve longstanding scientific questions. The third part of the lectures will highlight on-going space science related activities at LANL and will include a "career day" to convey job opportunities and desirable skill-sets for a career in space physics. Lectures will be coordinated with "labs" to get more hands-on experience. Space data analysis and modeling will be the main themes of the labs. Several field trips will be organized to visit Los Alamos facilities and historic sites (examples could include LANSCE, electron accelerators, visualization and high-performance computing labs, etc.).

Research projects

A unique aspect of the Los Alamos Space Weather Summer School is its emphasis on scientific research projects. Students team up with LANL mentors to work on unresolved scientific problems in space physics. LANL is engaged in a wide variety of space-physics activities and offers a host of exciting research projects. Check online at http://swx-school.lanl.gov for a list of current and past projects. Students can also propose their own ideas, which might include topics from their PhD thesis (contact the Space Weather Summer School management to find a suitable match to a LANL mentor). In the past, the majority of these projects led to presentations at major international conferences and, in some cases, to publications in peer-reviewed journals.

Students

Open to U.S. and foreign graduate students currently enrolled in PhD programs in space physics, planetary science, aerospace engineering, or related fields. Acceptance is based primarily on student's academic record, list of publications and presentations, letter of nomination, and content of cover letter. Preference will be given to students pursuing careers in the space sciences and who have completed at least their first year of graduate school, but students in any year may apply.
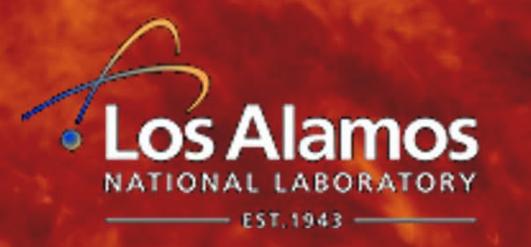
More information and how to apply:
Please visit the Summer School website at http://swx-school.lanl.gov for more information. Application materials should be sent to swx-school@lanl.gov.

Please include the following materials with your application:
1. Cover letter describing your research interests, why you would benefit from the summer school, potential project ideas (they can be related to your thesis work), and mentor requests
2. A current CV including full list of publications and presentations
3. Your undergraduate and graduate transcripts
4. A brief description of your PhD program and current progress
5. A nomination letter from your advisor
6. Two additional letters of reference if not enrolled in U.S. PhD program

Applications will be accepted starting early December 2022 and are due early January 2023. Acceptance notifications will be sent out in early February 2023.

Questions ? Email us at swx-school@lanl.gov

Los Alamos Space Weather Summer School

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