

HELIOPHYSICS

2013 Summer School *Heliophysics of the Solar Systems*

12–19 July 2013 • Boulder, Colorado

Application Deadline: 1 March

Spicules: Jets on the Sun. NASA image.

Special Opportunity for Physics Students & Physics Teachers

Applications are invited for the 2013 Heliophysics Summer School, which will be held in beautiful Boulder, Colorado. We are seeking students and undergraduate level teachers and instructors to join us this coming summer for a unique professional experience. Students and teachers will learn about the exciting science of heliophysics as a broad, coherent discipline that reaches in space from the Earth's troposphere to the depths of the Sun, and in time from the formation of the solar system to the distant future. At the same time, a goal of the Summer School is for the group of instructors to develop materials from Heliophysics that can be applied in their classes.

The Heliophysics Summer School focuses on the physics of space weather events that start at the Sun and influence atmospheres, ionospheres and magnetospheres throughout the solar system. The solar system offers a wide variety of conditions under which the interaction of bodies with a plasma environment can be studied: there are planets with and without large-scale magnetic fields and associated magnetospheres; planetary atmospheres display a variety of thicknesses and compositions; satellites of the giant planets reveal how interactions occur with subsonic and sub-Alfvénic flows whereas the solar wind interacts with supersonic and super-Alfvénic impacts.

Encompassed under a general title of comparative magnetospheres are processes occurring on a range of scales from the solar wind interacting with comets to the interstellar medium interacting with the heliosphere. The school will address not only the physics of all these various environments but will also go into the technologies by which these various environments are being observed. The program is complemented with considerations of the societal impacts of space weather that affects satellites near Earth and elsewhere in the solar system.

The school will be based on lectures, laboratories, and recitations from world experts, and will draw material from the three textbooks *Heliophysics I-III*, published by Cambridge University Press.

Several teachers along with about 35 students will be selected through a competitive process organized by the UCAR Visiting Scientist Programs. The school lasts for eight days, and each participant receives full travel support for airline tickets, lodging and per diem costs.

Student Application Requirements

- Currently enrolled as a graduate student in any phase of training, or first or second year postdoctoral fellow.
- Major in physics with an emphasis on astrophysics, geophysics, plasma physics, and space physics, or experienced in at least one of these areas.
- Pursuing a career in heliophysics or astrophysics.

Teacher Application Requirements

- At least three years of teaching experience. (Already having a connection with heliophysics is not a requirement.)
- Currently teaching physics (preferably electricity & magnetism), astronomy/planetary science, or Earth sciences at the upper division undergraduate level.
- Willingness to provide feedback to the Summer School faculty and organizers on the comprehensibility and comprehensiveness of the overall set of lectures and supporting materials.

For additional information on this program and instructions on how to apply, please visit the Heliophysics website at

www.vsp.ucar.edu/Heliophysics

For further information, call (303) 497-8649 or e-mail vspapply@ucar.edu



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