



JOB OPENING: Postdoctoral Research Scientist in Experimental Plasma Physics

The Space Science Institute (SSI) invites applications for a Postdoctoral Research Scientist to be based in Los Angeles, CA. The selected candidate will take a leading role in experiments aimed at understanding the Alfvén wave interactions thought to be at the heart of solar wind turbulence. This includes the unexpected generation of residual energy – excess energy in the magnetic fluctuations compared to the velocity fluctuations.

The goal of the project is to create strong, non-linear Alfvén wave interactions in the lab for the first time and characterize the residual energy and non-linear modes generated. The postdoctoral scientist will be responsible for conducting experiments on the Large Plasma Device at UCLA, analyzing both experimental results and existing hybrid particle-in-cell simulations of the experiment, and preparing results for publication. The selected candidate will work with SSI Research Scientist Dr. Seth Dorfman, who will be responsible for overseeing the project. The postdoctoral scientist will also have the opportunity to work with remote collaborators Dr. Christopher Chen (solar wind observations), Dr. Luca Franci (hybrid simulations), and Dr. Stanislav Boldyrev (theory). Results will have broad potential implications for the physics governing solar wind and other magnetized astrophysical turbulence.

For more information on the physics of residual energy, see the following paper by Dr. Chen:
<http://doi.org/10.1088/0004-637X/770/2/125>

Knowledge/Education: A Ph.D. in plasma physics or related fields is required prior to the start date of the position. Applicants should demonstrate the potential to publish research results in peer-reviewed high-quality journals, good communication skills, and the ability to work independently. No prior experience with the Large Plasma Device or hybrid simulation analysis is expected, but applicants should demonstrate skills that show they will be able to learn these tools quickly. Experience with laboratory plasma experiments or space plasma physics is considered an advantage.



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The position is expected to start in early or mid 2021. As we are primarily interested in finding the right candidate for the position, the exact start date is flexible. The initial appointment will be for 1 year, renewable up to a total of 20 months contingent upon satisfactory performance and continued availability of funds. The position is open to applicants within the US and abroad and will be based in Los Angeles, CA where Dr. Dorfman is a visiting researcher at UCLA. Opportunities therefore exist to interact with UCLA laboratory plasma physics (<https://plasma.physics.ucla.edu/>) and space physics (<https://epss.ucla.edu/research-areas/space-physics/>) groups, including group meetings and seminars. It is anticipated that work may begin remotely due to the ongoing coronavirus pandemic. The project is supported by a DOE Plasma Science Frontier grant awarded to SSI in 2020.

This is a full-time position with benefits. Benefits include health, dental, vision, and (after 1 year of service) 403(b) retirement plan. Position, salary, benefits, and travel budget for conferences are dependent upon continued availability of grant funding.

To Apply:

Send application materials to [ssih@spacescience.org](mailto:ssihr@spacescience.org) and cc sethd at spacescience dot org with “Attn: Dr. Seth Dorfman” in the subject line.

Please include a curriculum vitae, cover letter, statement of previous research experience (max 2 pages), and contact details for 3 references. Interviews will be conducted via Zoom. Please submit an application by January 22nd, 2021 to ensure full consideration.

Contact Dr. Seth Dorfman with questions or to submit your CV for a preliminary evaluation:
<https://www.spacescience.org/bio.php?emp=SDORFMAN>

Please note: The Space Science Institute is a non-profit, public benefit corporation and operates as an equal opportunity employer. This job description is general in nature and is not designed to contain or to be interpreted as a comprehensive inventory of all duties, responsibilities and qualifications of the position. More information about SSI can be found here: <http://www.spacescience.org/>