

PRINCETON UNIVERSITY
PRINCETON PLASMA PHYSICS LABORATORY

PPPL Job Title: Associate Research Physicist, or Staff Research Physicist, or Research Physicist

PPPL Organization: Plasma Science & Technology Department

Inquiry: Hantao Ji, hji@pppl.gov, 609-243-2162

PURPOSE OF JOB:

The successful candidate will be part of a team to commission FLARE (Facility on Laboratory Reconnection Experiments, flare.pppl.gov) and then conduct frontier experimental research on magnetic reconnection. The candidate will perform key experimental tasks to prepare FLARE towards a user facility: implementing the control system and initial set of diagnostics, establishing data processing and possibly management systems, commissioning routine operation processes, carrying out initial experimental campaigns, and supporting collaborative research with external users.

MAJOR RESPONSIBILITIES:

The Princeton Plasma Physics Laboratory seeks to fill an associate research physicist, or a staff research physicist, or a research physicist position in the Plasma Science & Technology Department. Working with other physicists, engineers, technicians, and graduate students, the candidate will perform testing and commissioning of the new FLARE (Facility for Laboratory Reconnection Experiments) device including, but not limited to, the areas of operation control and data acquisition/management/processing. The candidate will also lead experimental activity towards a user facility for experimental research on magnetic reconnection and related explosive phenomena. Close collaborations and interactions with physicists with a broad range of backgrounds are required. Candidates must have an extensive background in experimental physics, preferably in plasma physics. The major responsibilities include performing experimental research on magnetic reconnection, implementing initial set of diagnostics, commissioning the facility for research operation by establishing the control and possibly data management systems, supporting experiments led by others including external users, analyzing data, interpreting results, supervising junior physicists and graduate students, and presenting and publishing results jointly with other researchers. Coordinating activity with other technical, engineering and administrative personnel is also essential.

KNOWLEDGE AND SKILLS:

Applicants should have a Ph.D. in plasma physics or related physics, with preference given to applicants with experience in plasma experiments and their diagnostics, data acquisition, data processing/management, familiarities with python as well as EPICS7 environments, and applications to heliophysics, astrophysics, and fusion plasmas.