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P-24 Plasma Physics, Los Alamos National Laboratory

Reconnection Scaling Experiment (RSX)

This is a unique, high physics impact experiment that creates current carrying channels or "wires" made of plasma. These current ropes are not rigid, and are distorted by electromagnetic forces in three dimensional ways. In astrophysical, solar, space and laboratory plasma settings, rocket propulsion, satellite communication and magnetically-confined fusion, 3D MHD like processes play a fundamental role. For example distinct current-carrying flux tubes are the basic building blocks of the solar coronal plasma, especially during coronal eruptions and flares. Experimental post doc will also collaborate with theory-computational efforts at LANL (T5) and Katholique Univ. Leuven (space weather, www.soteria-space.eu). Magnetic reconnection in 3D is also an important ingredient. Funding from NASA and the Center for Magnetic Self Organization for studies of 3D magnetic reconnection.

Magnetized Target Fusion

The Magnetized Target Fusion project is a High Energy Density concept exploration program that aims to establish the scientific basis for a high risk, high payoff, faster and cheaper approach to fusion energy source. We are using a Field Reversed configuration (FRC) that will be compressed inside an aluminum "beer can" flux conserver to high density and temperatures. The FRX-L experiment at Los Alamos National Laboratory is used to create and diagnose an FRC, which will soon be radially compressed at Air Force Research Laboratory - Kirtland (requires USA green card or citizenship). Post doc position as employee of General Fusion http://www.generalfusion.com, working both at LANL and AFRL, as part of a LANL-General Fusion Collaborative Research and Development Agreement.

Los Alamos National Laboratory: A multi disciplinary research environment, with many opportunities to further your career and do great science. We host a vibrant student Applied Science Internship Program at LANL (http://wsx.lanl.gov), that cultivates critical skills and future LANL staff members.

post doc fellowship programs (coordinate with T. Intrator)

- Los Alamos Directors Funded Fellowship (any LANL project)
  - Highly prestigious, Well paid
  - Extremely competitive: Outstanding or better publication record & references.
  - Quarterly deadlines
- ORISE (MTF, RSX, possible other LANL ICF projects)
  - http://www.orau.gov/fusion/,
  - Linda McCamant at (865) 576-1089 ; email linda.mccamant@orau.org
  - deadline -- Oak Ridge Institute for Science and Education by 2011.
- NASA Heliophysics (for RSX)
  - email: vspapply@ucar.edu; website: http://www.vsp.ucar.edu
  - Phone 303-497-8649, deadline for applications is 2011

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