



DEPARTMENT OF PHYSICS
Physics, Engineering Physics,
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Postdoctoral position in the DEAP-3600 and DarkSide-20k experiments

Job Summary

The experimental particle astrophysics group at Queen's University in Kingston, Canada, which is part of the McDonald Institute (<https://mcdonaldinstitute.ca/>), expects to hire a postdoc to work on the liquid argon dark matter searches DEAP-3600 and DarkSide-20k with Professors Philippe Di Stefano, Art McDonald and Peter Skensved. The postdoc will be actively involved in the analysis of data from the ongoing DEAP-3600 experiment, including the development of analysis strategies to increase the sensitivity of the detector and the consideration of analysis and hardware changes to reduce radioactive background. In addition, the postdoc will be involved in development of the DarkSide-20k experiment at Gran Sasso with 20 tonnes fiducial of liquid argon extracted from an underground source, a stepping-stone towards a 300-tonne fiducial detector, Argo, for which the preferential location is SNOLAB.

Required Qualifications

- Candidates must have obtained a PhD in physics or applied physics, with a specialization in particle physics, nuclear physics, or instrumentation.
- The ability to perform independent research and to communicate results verbally and in writing.
- The ability to work in a team including both graduate and undergraduate students.

Preferred Qualifications

- Experience with particle detectors, including scintillators, and readout.
- Knowledge of liquid argon.
- Experience in rare-event searches and with low backgrounds.
- Proficiency in python and root.
- Expertise in likelihood analysis methods.

Start Date and Duration

Full-time 2 year appointment starting Fall 2019.

Application

Provide cover letter, full CV, 2 letters of recommendation (sent directly from the official email of the referee) to P. Di Stefano (distefan@queensu.ca). Review of applications begins July 01 2019; applications will be considered until the position is filled.

EMPLOYMENT EQUITY: The University invites applications from all qualified candidates. Queen's is committed to employment equity and diversity in the workplace and welcomes applications from women, visible minorities, Aboriginal peoples, persons with disabilities, and persons of any sexual orientation or gender identity. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University will provide support in its recruitment processes to applicants with disabilities, including accommodation that takes into account an applicant's accessibility needs. For more information about the position, and accommodations during the interview process, please contact P. Di Stefano (distefan@queensu.ca).