

# Postdoctoral position in rare-event searches & instrumentation



## Job Summary

The experimental particle astrophysics group at [Queen's University](#) in Kingston, Canada, expects to hire a postdoc starting summer 2018 to work under the supervision of P. Di Stefano ([site](#), [fb](#)) on one or more of the following topics related to rare-event searches and instrumentation:

- The [KDK experiment](#), measuring a rare decay of 40K, a background in many rare-event searches. The postdoc will contribute to instrumentation, experimental work, and data analysis.
- Fractures as a [background in scintillators](#) for rare-event searches. This involves a table-top, multi-channel, [setup](#) to study the effect of fractures in scintillators, and draws from both materials science and instrumentation.
- Scintillators at [cryogenic](#) temperatures as detectors for rare-event searches. The postdoc will lead measurements using an optical cryostat and analyze and interpret the results.

## Required Qualifications

- Candidates must have obtained a PhD in physics or applied physics, with a specialization in particle physics, nuclear physics, materials 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, ionization detectors and readout.
- Experience in material science and fracture physics.
- Experience in rare-event searches.
- Proficiency in python.

## Start Date and Duration

Full-time 1 year appointment starting summer 2018, with the possibility of renewal for an additional 2 years, contingent on agreement of the supervisor and funding availability.

## 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](mailto:distefan@queensu.ca). Review of applications begins April 16 2018; 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](mailto:distefan@queensu.ca)).*