



Postdoctoral fellowship

Experimental HEP physicist Skipper-CCD for neutrino physics and direct dark matter searches

The Particle and Radiation Detection Laboratory (LabDPR) at the Bariloche Atomic Center in San Carlos de Bariloche, Argentina, is looking for a postdoctoral researcher for a 2 years term. The candidates must have a PhD and experience in high energy experimental physics.

The candidate is expected to work within the laboratory in one or more project involving CCD particle detection. CCD sensors have been used with success for rare events physics such as neutrino physics (CONNIE) and dark matter direct search (DAMIC) thanks to their very low threshold (around 50 eV). A next generation of CCD sensor, the skipper-CCD, has been developed in the last five years and allows to reduce this threshold further down by a factor of 30 or more thanks to an extremely low sub-electron readout noise. The potential of skipper-CCD has been demonstrated by the SENSEI experiment and these sensors will be used in the future for CCD rare events experiments (CONNIE, VIOLETA, DAMIC-M).

The LabDPR is involved in CONNIE, VIOLETA and DAMIC-M, and runs a small-scale skipper-CCD experiment looking for potential dark matter signal through daily modulation (DM2). The candidate postdoc will work in one or more of these projects depending on his or her wishes and expertise. Work involves all stages of an experiment, starting from simulation and design (VIOLETA), data acquisition system (DAMIC-M), data analysis (CONNIE, DAMIC-M), or all of these including installation, operation and calibration (DM2).

The hiring net monthly salary is AR\$69633 and is updated by the Argentine FONCyT as part of the grant PICT-2018-03069.

Interested candidates should send a CV, a motivation letter and the name of two supporters by email to Xavier Bertou (bertou@cab.cnea.gov.ar). The call is open starting July 21 2020 and will close on August 7 2020. In case no suitable candidate is found the call will be extended. The position is expected to start on September 1st 2020.