

$\rho - \gamma + \pi$

3/8/2018

Juan Cruz Estrada Vigil
Fermilab MS127, POBox 500, Batavia, Illinois 60510
Tel.: (630)840-2153
Electronic mail: estrada@fnal.gov

Employment History

- 2014-now Dark Matter and New Initiatives group leader, Department Astrophysics
- 2011-now Senior Scientist at Fermilab, Particle Physics Division, Astrophysics Department
- 2011-2014 Deputy Head for Detector Development and Operations Department
- 2008-2011 Scientist-I at Fermilab
- 2004-2008 Wilson Fellow at Fermilab (Associate Scientist) - DES experiment
- 2002-2004 Postdoctoral Researcher at Fermilab - Dzero experiment

Education

- 2002 Ph.D., University of Rochester, Rochester, NY.
- 1998 Licenciado en Fisica, Instituto Balseiro, Argentina.
- 1991-1994 Undergraduate Student, Universidad Nacional de Buenos Aires, Buenos Aires, Argentina.

Awards and Recognitions

- 2017 FNAL-LDRD for development of optical and near-IR Microwave Kinetic Inductance Detectors.
- 2014 FNAL-LDRD for development of CONNIE experiment.
- 2013 Fermilab Inventors Award presented by the director for the development of a "High Resolution Neutron Imager by Means of a Boron coated CCD".
- 2013 Exceptional Performance Recognition Award at Fermilab "for outstanding contributions in bringing his deep knowledge of advanced principles of detection physics to the design, production, assembly and testing of the Dark Energy Camera imager, one of the most sophisticated light detectors ever made."
- 2012-2013 Fermilab-U.Chicago Fermilab Seed Grant for the development of DAMIC readout electronics.
- 2010 Presidential Early Career Award for Scientists and Engineers (PECASE). The PECASE Award is the highest honor bestowed by the U.S. government on outstanding scientists and engineers beginning their independent careers. The awards was conferred at the White House for "... widely-recognized contributions to high energy physics and particle astrophysics experiments, and his invention of a new detector concept that can extend searches for dark matter particles into a range not covered by existing experiments; and for actively involving high school science students and teachers in this research."
- 2004 Radiation and Instrumentation Early Career Recognition given by the Institute of Electrical and Electronics Engineers (IEEE) for "significant and innovative technical contributions to the science of measuring ionizing radiation". The recognition was based on the work done with the VLPC detectors at Fermilab.
- 2004 Wilson Fellowship given by Fermi National Accelerator Laboratory to work on any research area of the Fermilab program "... the Fellowships are awarded to those who have demonstrated unusual scientific abilities at and early stage of their careers and who are expected to have significant impact in particle physics."
- 2004 Humboldt Research Fellowship given by the Alexander von Humboldt Foundation to work on research and development of frictional muon cooling at Max Plank Institute in Munich, Germany. This fellowship was not accepted in favor of the Wilson Fellowship at FNAL.

Current Research Activities:

- Since 2017: Short Baseline Neutrino program, L2 manager for Near Detector installation
- MKIDs LDRD, Principal Investigator
- CONNIE LDRD, Principal Investigator
- DAMIC-100 (spokesperson), search for DM with CCDs
- Dark Energy Spectroscopic Instrument responsible for CCD detector packaging and characterization
- Dark Energy Survey and Sloan Digital Sky Survey data analysis for galaxy clusters. (L2 co-manager for the focal plane of the Dark Energy Camera)

$\rho - \gamma + \pi$

3/8/2018

Recent selected Papers:

- “Antonella: A nuclear-recoil ionization-efficiency measurement in silicon at low energies”, Izraelevitch et al (2017).
- “Measuring the Scatter of the Mass–Richness Relation in Galaxy Clusters in Photometric Imaging Surveys by Means of Their Correlation Function”, Campa, Julia; Estrada, Juan; Flaughner, Brenna, The Astrophysical Journal, Volume 836, Issue 1, article id. 9, 11 pp. (2017)
- “First direct detection constraints on eV-scale hidden-photon dark matter with DAMIC at SNO-LAB”, eprint arXiv:1611.03066
- “Measurement of the ionization produced by sub-keV silicon nuclear recoils in a CCD dark matter detector”, Chavarria, A.E. et al, Physical Review D, Volume 94, Issue 8 (2017).
- “The Dark Energy Survey: more than dark energy - an overview”, Dark Energy Survey Collaboration, Monthly Notices of the Royal Astronomical Society, Volume 460, Issue 2, p.1270-1299 (2016)
- “Results of the engineering run of the Coherent Neutrino Nucleus Interaction Experiment (CONNIE)”, Journal of Instrumentation, Volume 11, Issue 07, pp. P07024 (2016).