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Publications

Liquid Xenon

- A $^{83}\text{Kr}^m$ Source For Use in Low-Background Liquid Xenon Time Projection Chambers. [JINST 5, P05006 \(2010\)](#). ([arXiv](#))
- Scintillation Efficiency and Ionization Yield of Liquid Xenon for Monoenergetic Nuclear Recoils Down to 4 keV. [Phys. Rev. C 81, 025808 \(2010\)](#). ([arXiv](#))
- Calibration of a Liquid Xenon Detector with $^{83}\text{Kr}^m$. [Phys. Rev. C 80, 045809 \(2009\)](#). ([arXiv](#))
- The Scintillation and Ionization Yield of Liquid Xenon for Nuclear Recoils. [Nucl. Instrum. and Meth. A 601, p. 339 \(2009\)](#). ([arXiv](#))
- Preparation of Neutron-Activated Xenon for Liquid Xenon Detector Calibration. [Nucl. Instrum. and Meth. A 582, p. 569 \(2007\)](#). ([arXiv](#))
- Scintillation Response of Liquid Xenon to Low Energy Nuclear Recoils. [Phys. Rev. D 72, 072006 \(2005\)](#). ([arXiv](#))

Other Liquefied Noble Gases

- Pulse-shape Discrimination and Energy Resolution of a Liquid Argon Scintillator with Xenon Doping. [JINST 9, P06013 \(2014\)](#). ([arXiv](#))
- Radon Backgrounds in the DEAP-I Liquid-Argon-Based Dark Matter Detector. Submitted to *Astropart. Phys.* ([arXiv](#))
- Scintillation Yield and Time Dependence from Electronic and Nuclear Recoils in Liquid Neon. [Phys. Rev. C 86, 015807 \(2012\)](#). ([arXiv](#))
- Measurement of Scintillation Efficiency for Nuclear Recoils in Liquid Argon. [Phys. Rev. C 85, 065811 \(2012\)](#). ([arXiv](#))
- Calibration of Liquid Argon and Neon Detectors with $^{83}\text{Kr}^m$. [Phys. Rev. C 81, 045803 \(2010\)](#). ([arXiv](#))
- Scintillation Time Dependence and Pulse Shape Discrimination in Liquid Argon. [Phys. Rev. C 78, 35801 \(2008\)](#). ([arXiv](#))
- Scintillation of Liquid Neon From Electronic and Nuclear Recoils. [Astropart. Phys. 29, p. 161 \(2008\)](#). ([arXiv](#))
- Operation of a Thick Gas Electron Multiplier (THGEM) in Ar, Xe, and Ar-Xe. [JINST 3, P01005 \(2008\)](#). ([arXiv](#))
- Radioactive Krypton Background Evaluation Using Atom Counting. [Nucl. Instrum. and Meth. A 545, p. 524 \(2005\)](#). ([arXiv](#))
- Alpha and Beta Particle Induced Scintillations in Liquid and Solid Neon. [Nucl. Instrum. and](#)

[Meth. A 482, p. 387 \(2002\)](#).

- Liquid Helium and Neon - Sensitive, Low Background Scintillation Media For the Detection of Low Energy Neutrinos. [Journ. Low Temp. Phys. 118, p. 153 \(2000\)](#). ([arXiv](#))

LUX

- Radiogenic and Muon-Induced Backgrounds in the LUX Dark Matter Detector. Accepted to [Astropart. Phys. \(2014\)](#). ([arXiv](#))
- First results from the LUX dark matter experiment at the Sanford Underground Research Facility. [PRL 112, 091303 \(2014\)](#). ([arXiv](#))
- Radio-Assay of Titanium Samples for the LUX Experiment. Submitted to NIM (2014). ([arXiv](#))
- Technical Results from the Surface Run of the LUX Dark Matter Experiment. [Astropart. Phys. 45, p. 34 \(2013\)](#). ([arXiv](#))
- The LUX Prototype Detector: Heat Exchanger Development. [Nucl. Instrum. and Meth. A 709, p. 29 \(2013\)](#).
- The Large Underground Xenon (LUX) Experiment. [Nucl. Instrum. and Meth. A 704, p. 111 \(2013\)](#). ([arXiv](#))
- An Ultra-Low Background PMT for Liquid Xenon Detectors. [Nucl. Instrum. and Meth. A 703, p. 1 \(2013\)](#). ([arXiv](#))
- LUXSim: A Component-Centric Approach to Low-Background Simulations. [Nucl. Instrum. and Meth. A 675, p. 63 \(2012\)](#). ([arXiv](#))
- Data Acquisition and Readout System for the LUX Dark Matter Experiment. [Nucl. Instrum. and Meth. A 668, p. 1 \(2012\)](#). ([arXiv](#))

CLEAN

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- The Mini-CLEAN Experiment. [Nuc. Phys. B Proc. 173, p. 152 \(2007\)](#).
- Demonstration of Photomultiplier Tube Operation at 29 K. [JINST 2, P11004 \(2007\)](#). ([arXiv](#))
- Use of Activated Charcoal for the Purification of Neon in the CLEAN Experiment. [Nucl. Instrum. and Meth. A 570, p. 556 \(2007\)](#).
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XENON

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- Design and Performance of the XENON10 Dark Matter Experiment. [Astropart. Phys. 34, p. 679 \(2011\)](#). ([arXiv](#))
- Constraints on Inelastic Dark Matter from XENON10. [Phys. Rev. D 80, 115005 \(2009\)](#). ([arXiv](#))

- Limits on Spin-Dependent WIMP-Nucleon Cross Sections from the XENON10 Experiment. *Phys. Rev. Lett.* **101**, 091301 (2008). ([arXiv](#))
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Helium Molecules

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- Visualization Technique for Determining the Structure Functions of Normal-Fluid Turbulence in Superfluid Helium-4. *J. Low Temp. Phys.* **171**, p. 497 (2013).
- Observation of Crossover from Ballistic to Diffusion Regime for Excimer Molecules in Superfluid ^4He . *J. Low Temp. Phys.* **171**, p. 207 (2013). ([arXiv](#))
- Visualization Study of Counterflow in Superfluid ^4He using Metastable Helium Molecules. *Phys. Rev. Lett.* **105**, 045301 (2010). ([arXiv](#))
- Studying the Normal-Fluid Flow in Helium-II Using Metastable Helium Molecules. *J. Low Temp. Phys.* **158**, p. 346 (2010). ([arXiv](#))
- Observation of Single Compton-Electron Tracks in Superfluid Helium-4 and Trace Detection of Metastable Helium Molecules by Laser-Induced-Fluorescence Imaging. *J. Low Temp. Phys.* **158**, p. 331 (2010).
- Metastable Helium Molecules as Tracers in Superfluid ^4He . *Phys. Rev. Lett.* **102**, 235301 (2009).
- Detection and Imaging of He_2 Molecules in Superfluid Helium. *Phys. Rev. Lett.* **100**, 025301 (2008). ([arXiv](#))
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- Neutron-induced Luminescence and Activation in Neutron Shielding and Scintillation Detection Materials at Cryogenic Temperatures. [Nucl. Instrum. and Meth. B 217, p. 457 \(2004\)](#).
- Detecting Ionizing Radiation in Liquid Helium Using Wavelength Shifting Light Collection. [Nucl. Instrum. and Meth. A 516, p. 475 \(2004\)](#).
- A Long Wavelength Neutron Monochromator for Superthermal Production of Ultracold Neutrons. [Physica B 344, p. 343 \(2004\)](#).
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Dissertations

- Louis Kastens. [Calibration of Liquid Xenon Time Projection Chambers for the Direct Detection of Dark Matter](#). (2013)
- Walter Hugh Lippincott. [Direct Detection of Dark Matter with Liquid Argon and Neon](#). (2010)
- Angel Manzur. [Relative Scintillation Efficiency of Liquid Xenon in the XENON10 Direct Dark Matter Search](#). (2009)
- Wade G. Rellergert. [Detecting and Imaging He₂ Molecules in Superfluid Helium by Laser-Induced Fluorescence](#). (2008)
- Professor McKinsey. [Detection of Magnetically Trapped Neutrons: Liquid Helium as a Scintillator](#). (2002)