

R. Ford Hurley

Qualifications

- Experience measuring electrical characteristics and performance of silicon strip detectors. Typical measurements include capacitance, leakage current, charge collection efficiency, noise, and breakdown.
- Proficient working with a variety of test equipment including: high voltage source-meter units, LCR meters, electrometers, semiconductor parameter analyzers, oscilloscopes, micro-positioners, probes, probe cards, FPGA readout systems, computer controlled data acquisition, low temperature control systems.
- Proficient with computer software including: Microsoft Office, Mathematica, C++, Perl, LaTeX, EAGLE, PADS, QCAD, HTML, CSS, PHP, Windows, Linux, Mac OS X.
- Competent with hand tools, power tools, soldering, and precision assembly.
- Ability to analyze, organize, and present results in a clear and concise manner.
- Lab management experience with a team of 14 students.

Experience

Santa Cruz Institute for Particle Physics

University of California, Santa Cruz

Assistant Specialist (October 2007 – August 2008)

Researched silicon strip detectors for the ATLAS detector upgrade for the LHC. Studied effects of radiation damage at high particle fluences on detector prototypes. Supervised and trained lab workers. Designed new test methods and improved or adapted old ones. Analyzed, organized, and shared results with collaborators.

Lab Assistant (December 2006 – October 2007)

Undergraduate research position testing silicon strip detectors. Worked on a team to develop a doping density simulation for irradiated detectors.

Media Services

University of California, Santa Cruz

Senior Technology Assistant (July 2005 – May 2007)

Provided media equipment and technical support for classes, students, teachers, and special events and helped maintain equipment through testing and minor repairs.

Education

University of California, Santa Cruz

Bachelor of Science in Physics (2003 – 2007)

Publications

“Determination of the charge collection efficiency in neutron irradiated silicon detectors”

Petterson, M.K.; Hurley, R.F.; Arya, K.; Betancourt, C.; Bruzzi, M.; Colby, B.; Gerling, M.; Meyer, C.; Pixley, J.; Rice, T.; Sadrozinski, H.F.-W.; Bernardini, J.; Borrello, L.; Fiori, F.; Messineo, A.;

Nuclear Science Symposium Conference Record, 2007. NSS '07. IEEE

Volume 2, Oct. 26 2007-Nov. 3 2007 Page(s):1329 - 1331

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(To be published in IEEE Transactions on Nuclear Science)

“Extraction of the effective doping density profile in irradiated strip detectors”

Bruzzi, M.; Betancourt, C.; Gerling, M.; Hurley, R.F.; Petterson, M.K.; Sadrozinski, H.F.-W.;

Nuclear Science Symposium Conference Record, 2007. NSS '07. IEEE

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