

Curriculum Vitae

Brad Schoenrock

1 Education

PhD seeking Graduate Student MSU 2010-present
Masters Michigan State University 2012
REU at Cornell University 2009
B.S. physics and mathematics with minors in chemistry and computer science Northern Michigan University 2006-2010

2 Research experience

Search for $t\bar{t}$ final state in ATLAS, Advisor: Dr. Reinhard Schwienhorst
Calculation of Diboson cross sections at the LHC, Advisor: Dr. Reinhard Schwienhorst
Single top quark cross section measurement in the t-channel at the high-luminosity LHC, Snowmass 2013, Advisor: Dr. Reinhard Schwienhorst
Creating the planetarium show "Relics of the Big Bang" for ATLAS outreach, Advisor: Dr. Reinhard Schwienhorst
Fitting reaction rates for astrophysically relevant nuclear processes, Advisor: Dr. Hendrik Schatz.
Assembly of neutron detectors for a measurement of the electric form factor of the neutron, Advisor: Dr. William Tireman
Soil and sediment sampling project (Searching for Naturally Occurring Radioactive Materials) in Marquette MI, USA, Advisor: Dr. William Tireman

3 Publications and Papers

Single top quark cross section measurement in the t-channel at the high-luminosity LHC Brad Schoenrock, Elizabeth Drueke (Michigan State U.), Barbara Alvarez Gonzalez (Michigan State U. & Cantabria Inst. of Phys.), Reinhard Schwienhorst (Michigan State U.). Aug 28, 2013. 16 pp. e-Print: arXiv:1308.6307
Snowmass 2013 Top quark working group report Top Quark Working Group Collaboration (K. Agashe (Convener) et al.). Nov 8, 2013. 54 pp. e-Print: arXiv:1311.2028
Searches for resonances in the $t\bar{b}$ and $t\bar{c}$ final states at the high-luminosity LHC with contributions from the ATLAS Collaboration (Elizabeth Drueke et al.). Sep 26, 2013. e-Print: arXiv:1309.7043

4 Presentations

"Single top quark cross section measurement in the t-channel at the high-luminosity LHC"
Snowmass proceedings, 2013

"Relics of the Big Bang-Live talks" Abrams planetarium, 2011

"Developing Automatic Test Electronics for Measuring the Performance of SRF Cavities"
at Argonne National Laboratorys Symposium for Undergraduates, 2009

"Neutron Detector Assembly for a High Precision Measurement of the Electric Form
Factor of the Neutron" at Argonne National Laboratorys Symposium for Undergraduates,
2008

5 Languages

I am familiar with C++, root, LaTeX, java, labview, MATLAB, some bash, some Visual
Basic, and some assembly code.

6 Awards and Acknowledgements

AAPT Best Graduate TA, 2012-2013

Graduated Suma Cum Laude NMU, 2010

Honors Graduate, Northern Michigan University, 2010

Outstanding physics undergraduate Northern Michigan University, 2010

7 Job experience

Research assistant MSU high energy physics group, 2010-present

Teaching Assistant, MSU physics department, Introductory Physics Laboratory 1, 2010

Research assistant National Superconducting Cyclotron Laboratory, 2010

Walk in tutor at NMU, Marquette MI, 2008-2010

Research assistant physics dept. at NMU, Marquette MI, 2008

Individual tutoring for Student Support Services (SSS) at NMU, 2007-2010

Walk in tutor for SSS, Marquette MI, 2007-2010

Study group tutor for SSS covering introductory physics 1 & 2, Marquette MI, 2007-2010

Lab setups for the physics dept. at NMU, Marquette MI, 2007-2010