Curriculum Vitae

Andrew C. Haas
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1. Academic Degrees

PhD	University of Washington	2004	Physics
BS with Honors	Brown University	1998	Physics

2. Professional Experience

2004 - present Postdoctoral Research Associate
Department of Physics, Columbia University / Nevis Labs

Performed several analyses using data from Run II of the D0 experiment that address electro-weak symmetry breaking and the search for physics beyond the Standard Model. Published the most sensitive search for Higgs bosons in Supersymmetric models in 2005. Found the first evidence for Z->bb decays at D0. Completed a search for new long-lived particles in the context of split-Supersymmetry. Used an artificial neural-network to optimize and perform a search for the Standard Model Higgs boson in the ZH channel. Convening the bottom-quark-jet identification group since Fall 2005, where I initiate projects and supervise students. Calibrated the hadronic calorimeter, leading to better reconstruction of jets. Continuing to support and improve the D0 Level 3 trigger / data acquisition system and event display.
Developed software for automated lifetime testing of the ATLAS LAr front-end boards (FEBs). Assisted in installation and commissioning of the FEBs on the ATLAS experiment. Developed software for online data-quality monitoring of the FEBs. Performed a Higgs search in simulated ATLAS data using the ATHENA framework. Worked on the ATLAS event display, and have been responsible for calorimeter display since 2005.

1999 - 2004 Research Assistant
Department of Physics, University of Washington, Seattle, WA

Performed a search using data from Run II of the D0 experiment at Fermilab to set a limit on the production of Higgs bosons in the MSSM. Helped to design, implement, commission, and support a new Level 3 trigger / data acquisition system for the D0 experiment based on commodity hardware and open-source software, leading to a publication in 2004. Implemented a monitoring system for the new data acquisition system at D0, published in 2003. Developed various software for the triggering and reconstruction of events from D0, including a new algorithm for reconstructing charged particle tracks and event vertices, published in 2000.

1998 - 1999 Research Assistant / Teaching Assistant
Department of Physics, University of Washington, Seattle, WA

Worked on simulations of the upcoming GLAST experiment. Worked on the D0 event display (d0ve) and debugged the D0 detector geometry model. Taught laboratory classes in mechanics and E&M

3. Other Experience and Activities

Summer 2003 SLAC Summer Institute
Menlo Park, CA

Attended lectures and took part in discussion sessions focused on the interface between Cosmology and High-Energy Physics.

2002 - 2003 Graduate Student Representative
Fermilab, Batavia, IL

Organized monthly talks, out-reach events, and a student conference. Took part in a trip to Washington, D.C. to raise awareness of High-Energy Physics in the Senate and Congress.

Summer 1999 Software Developer
Pacific Northwest National Laboratories, Richland, WA

Developed software based on C++ and ROOT for the real-time monitoring of rare radioactive isotope concentrations.

4. Professional Affiliations

American Physical Society
American Association for the Advancement of Science
Elected member of Sigma Xi, The Scientific Research Society

5. Awards

2003 American Physical Society Northwest Section
Best Student Talk

2002 D0 Collaboration Meeting
Outstanding grad-student contributions

6. Selected Publications

D0 Collaboration (V.M. Abazov *et al.*), “Search for neutral supersymmetric Higgs bosons in multijet events at s**(1/2) = 1.96-TeV”, Phys.Rev.Lett.95:151801,2005, hep-ex/0504018.

B.Angstadt, *et al.*, "The DZERO level 3 data acquisition system", IEEE Trans.Nucl.Sci.51:445-450, 2004.

A. Haas *et al.*, The D0 online monitoring and automatic DAQ recovery, FERMILAB-CONF-03-467, CHEP-2003-TUGP011, Jun 2003, physics/0306195.

A. Haas (2000), “Simultaneous Tracking and Vertexing with Elastic Templates”, Proceedings of the VII International Workshop on Advanced Computing and Analysis Techniques in Physics Research, Oct 2000.

7. Presentations, Papers, and Posters

A. Haas for the DZero Collaboration (2006), “Search for the SM Higgs boson in the ZH->mumubb channel”, preliminary results for DPF 2006, *to be released*.

A. Haas for the ATLAS Collaboration (2006), “MSSM Higgs Prospects at ATLAS”, DPF, Hawaii.

A. Haas for the DZero Collaboration (2006), “MSSM Higgs Searches at D0”, DPF, Hawaii.

A. Haas for the DZero Collaboration (2006), “New Phenomena Searches at D0”, Exploring New Phenomena Workshop, http://home.fnal.gov/~gerstein/NPworkshop/.

A. Haas for the DZero Collaboration (2006), “Evidence for Z->bb decays at D0”, preliminary results for ICHEP 2006, http://www-d0.fnal.gov/Run2Physics/WWW/results/prelim/HIGGS/H22/H22.pdf

A. Haas for the DZero Collaboration (2006), “Search for stopped gluinos”, preliminary results for Moriond 2006, http://www-d0.fnal.gov/Run2Physics/WWW/results/prelim/NP/N42/N42.pdf

A. Haas for the DZero Collaboration (2005), “Search for non-SM Higgs at D0”, SUSY 2005, Durham, UK.

A. Haas for the DZero Collaboration (2004), “Higgs Searches at D0”, Lake Louise, Alberta, CA.

A. Haas, “A search for neutral Higgs bosons at high tan beta in multi-jet events from

p anti-p collisions at s**(1/2) = 1960-GeV", FERMILAB-THESIS-2004-26.

A. Haas, *et al.* (2003), "Dataflow in the DZero Level3 Trigger / DAQ System", Proceedings of the 2003 Nuclear Science Symposium, Section N36-71.

A. Haas for the DZero Collaboration (2003), "Recent Results from DZero", American Physics Society Northwest Session, Portland, OR.

A. Haas for the DZero Collaboration (2003), "Search for Neutral Supersymmetric Higgs Bosons at the DØ Detector at the Tevatron in Run II", American Physical Society April Meeting, Philadelphia, PA.

A. Haas, *et al.* (2002), "Ethernet-based Data Acquisition for the DZero Experiment at Fermilab", Proceedings of the 2002 World Multi-Conference on Systematics, Cybernetics, and Informatics.

A. Haas for the DZero Collaboration (2002), "Search for Neutral Supersymmetric Higgs Bosons at the DØ Detector at the Tevatron in Run II", American Physical Society April Meeting, Albuquerque, NM.

A. Haas (1998), "The Search for the Stau at D0", Senior Thesis, Brown University.