

## CURRICULUM VITAE

### **Julia Thom-Levy, Assistant Professor of Physics**

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### **Education:**

- Ph.D. in Physics, University of Hamburg, Germany, 2001.  
Advisor: Prof.Rolf Heuer, Title: "Time dependent  $B_s$  Oscillations at SLD"
- Diplom, University of Hamburg, Germany, 1997. Advisor: Prof.Schmidt-Parzefall

### **Appointments:**

- Assistant Professor, Cornell University, 2005-present
- Visiting Scientist at RWTH Aachen, March-September 2009
- Research Associate, Fermi National Accelerator Laboratory, 2002-2005
- Research Assistant, Stanford Linear Accelerator Center, 1997-2001

### **Funding and Awards:**

- NSF CAREER grant for Silicon Pixel Detector R&D for S-LHC, \$500.000, 2007- 2012
- DOE/NSF Grant for Pixel Detector Development for the ILC, \$100.000, 2008-2011
- Particle Physics at the Energy Frontier with CMS. (NSF) 04/15/2008 – 03/31/2011, \$2,067,000 [co-PI with J. Alexander (PI), L. Gibbons, P.Wittich, and A. Ryd]
- USCMS Fellowship for Teacher Development, \$5000, 2007

### **Graduate Fellowships:**

- German National Scholarship Foundation Fellowship for graduate studies, 1993-97
- German National Scholarship Foundation Research Fellowship, 1997

### **Selected Publications:**

- *Measurement of the top Pair Production Cross Section at  $\sqrt{s}=7$  TeV using b-quark Jet Identification Techniques in Lepton+Jet Events*, CMS collaboration, to be submitted to PRD. CERN-PH-EP-2011-085
- *Search for  $B_s$  to  $\mu\mu$  and  $B^0$  to  $\mu\mu$  Decays with CDF II*, CDF collaboration, submitted to PRL, arXiv:1107.2304v1 [hep-ex], Fermilab-Pub-11-315-E. An extended version of this paper will be submitted to PRD.

- *Model Discrimination with the CMS Detector: A Case Study*. By Gregory Hallenbeck, Maxim Perelstein, Christian Spethmann, Julia Thom, Jennifer Vaughan. Dec 2008. 18pp. e-Print: arXiv:0812.3135 [hep-ph]. Published in Phys.Rev.D79:075024,2009.
- *A Measurement of the  $t$ - $\bar{t}$  Cross Section in  $p$ - $\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV using Dilepton Events with a Lepton plus Track Selection*. By CDF Collaboration (T. Aaltonen et al.). FERMILAB-PUB-09-091-E, Mar 2009. 43pp. e-Print: arXiv:0903.5263 [hep-ex]. Phys.Rev.D79:112007,2009.
- *Interposer Development for 3D Trackers*, Alexander, Lutz, Suri, Thom, *JINST*, vol. 5 C0800, (2010)
- *Search for  $B(s)0 \rightarrow \mu^+ \mu^-$  and  $B(d)0 \rightarrow \mu^+ \mu^-$  decays in  $p$  anti- $p$  collisions with CDF. II*. By CDF Collaboration (A. Abulencia et al.). FERMILAB-PUB-05-367-E, Aug 2005. Published in Phys.Rev.Lett.95:221805,2005, Erratum-ibid.95:249905,2005
- *Measurement of the  $W^+W^-$  Production Cross Section in proton-anti-proton Collisions at  $\sqrt{s}=1.96$  TeV using Dilepton Events*, The CDF Collaboration, Phys. Rev. Lett. **94**, 211801 (2005).
- *Measurement of the top Production Cross Section in proton-anti-proton Collisions at  $\sqrt{s}=1.96$  TeV using Dilepton Events*, The CDF Collaboration, hep-ex/0404036, Phys.Rev.Lett.93:142001,2004
- *Search for  $B(s)0 \rightarrow \mu^+ \mu^-$  and  $B(d)0 \rightarrow \mu^+ \mu^-$  Decays in  $p$  anti- $p$  Collisions at  $\sqrt{s}=1.96$  TeV*, hep-ex/0403032, The CDF Collaboration Phys.Rev.Lett.93:032001,2004
- *Search for time dependent  $B0(s)$  - anti- $B0(s)$  oscillations using a vertex charge dipole technique*. By SLD Collaboration (Koya Abe et al.). SLAC-PUB-9285, Sep 2002. 17pp. Published in Phys.Rev.D67:012006,2003. e-Print: hep-ex/0209002
- *Time Dependent  $B_s$  Mixing using Inclusive and Semileptonic  $B$  Decays at SLD*, Nucl. Instrum. Meth. A **446**, 53-58 (2000)

### Conference Proceedings:

- *Heavy Flavor Physics at the Tevatron*, CDF and D0 Collaborations (Julia Thom for the collaboration), to be published in Proceedings for Rencontres de Moriond 2011, Electroweak Interactions
- *Top physics at the Tevatron*, CDF and D0 Collaborations (Julia Thom for the collaboration). DESY-PROC-2010-01, Dec 2010. 6pp. Published in Physics at the LHC 2010 128-133, Hamburg 2010,
- *Top Physics at CDF* Julia Thom for the CDF Collaboration, FERMILAB-CONF-04-089-E, Conference Proceedings for Rencontres de Moriond 2006, La Thuile, Italy
- *The CDF II Silicon Detector* Julia Thom for the CDF Collaboration, FERMILAB-CONF-04-088-E, Jul 2004. Instrumentation and Measurement Technology Conference (IEEE-IMTC 2004)
- *Rare Charm and B Decays at CDF* Julia Thom for the CDF Collaboration, FERMILAB-CONF-03-387-E, Dec 2003, Presented at International Europhysics

Conference on High-Energy Physics (HEP 2003), Aachen, Germany, 17-23 Jul 2003.

- *Time Dependent  $B^0$  Mixing at SLD* Julia Thom for the SLD Collaboration, SLAC-PUB-9035, Published in Budapest 2001, High energy physics hep2001/094

**Other Publications:**

- Leanne Avery and Julia Thom "*Rural Students, Local Knowledge and Classroom Science*" Paper presented at the annual meeting of the Rural Sociological Society, Marriott Santa Clara, Santa Clara, California, Aug 02, 2007 2011-05-19 [http://www.allacademic.com/meta/p186872\\_index.html](http://www.allacademic.com/meta/p186872_index.html)

**Collaborators and other Affiliations:**

- CMS Collaboration (over 2000 collaborators)
- FNAL Silicon R&D group and American Semiconductor, (10 collaborators on SBIR)
- Prof. Leanne Avery, SUNY College of Oneonta, and the New York State Center for Rural Schools
- CDF Collaboration (over 700 collaborators)
- SLD Collaboration (over 100 collaborators)

**Graduate and Postdoctoral Advisors:**

- Professor John Jaros, SLAC and Professor Rolf Heuer, Hamburg (Graduate),
- Avi Yagil, Fermi National Accelerator Laboratory (Postdoctoral)

**Thesis Advisees:**

- Jennifer Vaughan (2006-2011)
- Yao Weng (2009- present)
- Walter Hopkins (2009 - present)
- Gala Kaufman (2010 - present)

**Postgraduate Scholars:**

- Lukas Winstrom
- Freya Blekman
- Joshua Thompson

**Service to the Field:**

- Member of two review panels for the Small Business Innovation Research (SBIR) program, 2009 and 2010
- USLHC executive committee, member 2008-2010
- Reviewer of a US-wide NSF proposal, winter 2010
- Outside reviewer of PhD thesis, University of Toronto, July 2011

- Member of an Analysis Review Committee for CMS (Evidence for Single Top) result and publication, 2011
- Chair of Analysis Review Committee for CMS (Single top cross section in tW channel)
- Member of 3 Godparent committees for CDF top analyses, 2006-2011
- Mentor for Cornell Presidential Research Scholar Program and the REU program

### **Service to the Cornell Physics Department:**

- Major advisor, Cornell Physics Department, 2006-present
- Faculty Contact for Society of Physics Students 2008-2009
- Member of Physics Faculty Search committee, 2006

### **Science Outreach Work**

- Lecturer for the E-CLOUD conference Teacher workshop, 2010
- Lecturer for the Center for Nanoscale Institute for Physics Teachers, Summer 2006
- PI for NSF funded program to address science education for girls in high-need rural areas of upstate NY since 2007: activities between 2006 and 2011 included running teacher workshops, organizing school visits, field trips, student and teacher interviews and conference visits
- Articles on LHC Physics for Cornell and Ithaca Newspapers, 2009-2010
- Co-PI for USCMS Fellowship program to improve science comprehension at the middle school level
- Fermilab Saturday Morning Physics program for High School Students, 2002-2005
- Tour guide and Public lectures on High Energy Physics at SLAC , 1998-2002

### **Invited talks:**

- *“First two-sided limit of the  $B_s \rightarrow \mu\mu$  decay rate”* Joint Experimental-Theoretical Seminar at the Fermi National Accelerator Center (“Wine and Cheese Seminar”), July 2011
- *“First two-sided limit of the  $B_s \rightarrow \mu\mu$  decay rate”* Physics Seminar at University of Toronto, July 2011
- *“New results from the LHC: Top Physics”*, Physics Colloquium at MIT, April 2011
- *“Heavy Flavor Physics at the Tevatron”* Plenary talk at Rencontres des Moriond, Italy, March 2011
- *“Recent Results from CMS”* Rochester University Physics Colloquium, December 2010
- *“Recent Results from CMS”* Lecture at the 2010 Stanford Linear Accelerator Center Summer Institute (SSI 2010), June 2010
- *“Top Physics at the Tevatron”*, Plenary talk at Physics at the LHC Conference in Hamburg, Germany 2010

- “*Sensor R&D at Cornell*”, Talk at Argonne National Lab Silicon Pixel Detector Workshop, July 2010
- “*Model Discrimination with the CMS Detector: A Case Study*”, Seminars at University of Bonn and RWTH Aachen, July 2009
- “*Highlights from the Tevatron*” Annual University High Energy Lecture at the RWTH Aachen, Germany, July 2007
- “*Physics with high- $p_t$  Dileptons at CDF*”, Experimental High Energy Physics Seminar, Princeton University, 2005
- “*A Search for New Physics at the Tevatron*”, Physics Colloquium, University of Washington, 2005
- “*A Search for New Physics at the Tevatron*”, Physics Colloquium, Cornell University, 2005
- “*Physics with high- $p_t$  Dileptons at CDF*” Experimental High Energy Physics Seminars at Rutgers University, Johns Hopkins University, University of Minnesota, University of Wisconsin, Cornell University, 2005
- *Top Physics at CDF*, Plenary Talk at `Les Rencontres de Physique de la Vallee d'Aoste", Italy, February 2004
- *The CDF II Silicon Detector*, Invited Lecture at the IEEE Instrumentation and Measurement Technology Conference, Lago di Como, Italy, May 2004
- *Rare Charm and B decays at CDF*, International Europhysics Conference, Aachen, Germany, July 2003
- “*The Search for  $B_s \rightarrow \mu\mu$  at the CDF Experiment*”, Chicago Flavor Seminar at Fermilab, November 2002
- *$B_s$  mixing at SLD* International Europhysics Conference on High Energy Physics, Budapest, Hungary, July 2001.
- *$B_s$  mixing at SLD*, Plenary talk, presented at the Beauty 1999 conference, Bled, Slovenia, June 1999
- “ *$B_s$  Mixing Projections at HERA-B*”, Experimental High Energy Physics Seminar at the Stanford Linear Accelerator Center, May 1997