

VITAE -- STEPHEN A. WOLBERS

September 5, 2011

Title: Scientist II
Fermilab MS 368
Computing Division
P.O. Box 500
Batavia, IL 60510

Birth Place: Sheldon, IA, USA.

EDUCATION

Undergraduate: A.B. Degree, 1978, U.C. Berkeley (Math and Physics)
Graduate: M.A. Degree, 1980, U.C. Berkeley (Physics)
Ph.D. Degree, December, 1984, U.C. Berkeley (Physics)
Ph.D. Advisor: Harry H. Bingham (deceased)
Thesis Title: Inclusive Photoproduction of Strange Baryons at 20 GeV.

POSITIONS HELD

Scientific Appointments:

September, 1978 -- June, 1980	Teaching Assistant, U.C. Berkeley
June, 1980 -- December, 1984	Research Assistant, U.C. Berkeley
January, 1985 -- July, 1989	Research Associate, Fermilab
July, 1989 -- October, 1994	Associate Scientist, Fermilab
October, 1994 -- May 1, 1998	Scientist I, Fermilab
May 1, 1998 -- present	Scientist II, Fermilab

Management Appointments:

April, 1991 -- February, 1994	Group Leader, Farms Group, Computing Division
February, 1994 -- December 31, 1996	Head, OSS Department, Computing Division
January 1, 1997 -- June 30, 1998	Deputy Head, Computing Division
July 1, 1998 -- September 30, 1998	Acting Head, Computing Division
October 1, 1998 -- October 31, 2002	Deputy Head, Computing Division
November 1, 2002 -- August 31, 2005	Associate Computing Division Head, Financials and Projects
September 1, 2005 -- November 30, 2006	Head, CEPA Department, Computing Division
December 1, 2006 -- March 31, 2008	Associate Computing Division Head, ILC and Future Programs, CD Liaison to ILC program at Fermilab
April 1, 2008 -- Present	Associate Computing Division Head, Scientific Computing Facilities

Project Appointments:

August 1, 2003 -- July 1, 2005	Project Manager, Tevatron BPM Upgrade Project
July 1, 2005 -- October 31, 2006	Project Manager, Main Injector BPM Upgrade Project

EXPERIMENTAL AFFILIATION

1980 – 1984	SLAC Experiment BC 72/73/75/76
1985 – 2001	Fermilab Experiment E665
1997 – Present	Fermilab Experiment CDF

Member, APS and ACM.

AWARDS

Employee Performance Recognition Award (EPRA):

2002: For service as Deputy Head and Acting Head of the Computing Division

2005: For leading the Tevatron BPM Upgrade Project

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Principal Achievements 2010-2011

Scientific:

I served as godparent chair on two different analyses in CDF. The first analysis was completed and published in early 2011. The second was completed in late summer 2011 and the paper was submitted for publication.

I took 2 sets of shifts on CDF in 2011. The first was my normal share and the second was voluntary. The experiment was reaching the very end of its life and there was a need to fill a week of shifts through the Labor Day weekend.

Management:

Most of my time is devoted to organizational and management matters. I currently serve as leader of the Scientific Computing Facilities Quadrant in CD.

There have been personnel changes made to adjust the quadrant to the mission of the Division and to the work of the laboratory, as well as to properly develop the staff and to try to properly match the people with the work of the quadrant. Thought not extensive or rapid the changes over time integrate to rather substantial adiabatic modification to the staffing and it is effective. There are of course more changes to be made and this will continue into the future.

In the past month (early June), as part of the Computing Sector organization, the facility operations department was moved out of the SCF quadrant. I plan to continue close cooperation with the department but know very well that a department head (Adam Walters) will necessarily work most closely with their supervisor so any discussions will be reduced.

One issue that I constantly work on is a push toward commonality in the quadrant. This encompasses software, tools, procedures, hardware, and architecture, interconnects, etc. This goal is not only difficult to achieve but it may in fact be undesirable in some ways. The ability to seek out and try new approaches is at the very heart of computing today and has been for as long as I can remember. Forcing too much commonality might have the unanticipated consequence of freezing the quadrant into outdated and/or less than optimal approaches. However, the ability to work with equally modern and effective tools in areas where there is no value added to going it alone needs to be recognized and encouraged whenever possible. This includes system management, disk systems and file systems, batch systems, worker nodes, servers, tapedrives, etc. We are having some success this year in this area especially in the purchase process as we work with Patty's quadrant to make the big buys. Even so the purchasing process is huge and requires a large effort because of the requirements for different types of computing in many areas.

I spent time on setting up task forces and committees to study storage issues, to coordinate disk purchases and to organize and purchase worker nodes. I hope to use this technique more often to encourage cross-department and cross-quadrant cooperation and information exchange. I also have

encouraged briefings (e.g. the VM/Cloud briefing) to bring people and ideas together – even when they don't want to.

I encourage departments to think creatively to use resources well and to bring in additional resources whenever possible. Such a thing occurred when Gabriele brought in 2 visitors from KISTI to collaborate with Fermilab on many grid and cloud issues. This is something I think that the lab benefits greatly from and I hope that we can do more in the future to show that Fermilab is a welcoming place for people all over the world.

The quadrant is fully engaged in ITIL. The benefits are quite obvious to people, especially in such areas as incident management, problem management, critical incidents, change management, etc. There are areas where some fine tuning will be required and more work needed. I encourage SCF to be a part of the solution and to work with the ITIL process to improve those areas.

I conduct monthly meetings with the “leaders” of the SCF quadrant which includes all department heads, associate, assistant and deputy heads, group leaders – basically anyone with some sort of management role. These are quite well attended and give everyone a chance to speak and to hear about all the many things going on during the year including safety, changes to the organization, budget, reviews, conferences, projects, etc. I keep them short and to the point and find that they work well.

Service Work/External Committees:

I am participating in more lab and external committees. The following I think cover most of them:

US Atlas Detector Advisory Panel: I continue to serve on the US ATLAS Project Manager's Review and this year we met the day after a major snowstorm January 27-28, 2011. Even under such unusual circumstances (I was one of the few committee members who made it there in person) it was an interesting review and I think that the US ATLAS program benefits from the input and uses it wisely. I tend to focus on the online/DAQ system even though that is not my area of expertise (it is what is assigned to me). The transition from construction to steady running and upgrade planning was the main focus for this year's discussions.

Membership in the Data Preservation and Long Term Data Analysis in HEP Workshop(s):

I spent a large amount of time and effort this year to prepare for and then to host the DPHEP workshop at Fermilab May 16-18, 2011. This was a big job and required a lot of help from many people including Carla and Fang and David Ritchie, the local organizing committee, and the lab's Conference Office. I learned enough about workshops of this size to consider carefully before doing another one. I think that smaller or larger conferences would be easier run. Nevertheless, I will say that it went very well and helped to show Fermilab in a positive light to this community. Of course we need to consider the important data preservation and analysis issues as we move forward and come to the conclusion of Run 2, MINOS, miniBooNE, etc.

IN2P3 Review:

During June 2010 I attended my second review (actually a visiting committee) of the CC-IN2P3 computing facility. This is a yearly visit and is meant to help CC-IN2P3 by hearing from customers (e.g. LHC experiments), funding agencies, laboratories, and others. I enjoyed it again and learned more about the way that CC-IN2P3 manages their scientific computing systems and as usual made contact with many others in HEP/Astro computing in the world. I pass along relevant information and contacts. I anticipate another review this fall (the schedule is changing this year).

SLLP Training:

I took the SLLP training in 2010 and finished in November 2010. It was a fascinating experience and gave me many ideas on how to do my work and how to interact with people. It is something that I recommend to others and felt that working through the assignment with the people from Argonne and Jefferson Lab was quite valuable. What is interesting, though quite predictable, is that the people involved in the class rapidly disengage and rarely establish long-term relationships. I believe that a few people in previous “cohorts” have continued some relationship but given the different interests and the incredibly busy people involved it is no big surprise that very little continuation of any working relations occurs. The labs may want to think about this as the program continues.

DOE Panel on transatlantic networking:

This panel was charged in early 2010 and the panel’s work completed in October 2010. This was a “letter review” and so my chairmanship consisted mainly of organizing the meetings, keeping track of information, making assignments where required, and herding people to keep on a schedule. Much later I heard about the result of the review (informally through other channels). No big surprises here.

Ask-a-Scientist

I usually work once/year at a Sunday Ask-a-Scientist event at Fermilab. This year Heidi and I worked at the lab open house in February. It is amazing how big an event this is and we certainly talked to quite a few people. One of them was looking for help on a project about anti-matter and I was able to get her into contact with some people in the anti-proton source.

Search for SC Division Head

I was appointed as chair of the committee to recommend a candidate for the Head of the Scientific Computing Division. The work began in June 2011 in earnest but most will occur in July and August so more properly belongs in next year’s accomplishment report.

PUBLICATIONS LIST

CDF (since 2009)

1) [Measurement of Particle Production and Inclusive Differential Cross Sections in p anti-p Collisions at \$s^{*\(1/2\)} = 1.96\text{-TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0904.1098 [hep-ex]].
Phys.Rev. D79 (2009) 112005.

2) [First Measurement of the b-jet Cross Section in Events with a W Boson in p anti-p Collisions at \$s^{*\(1/2\)} = 1.96\text{-TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0909.1505 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 131801.

3) [Measurements of the top-quark mass using charged particle tracking.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0910.0969 [hep-ex]].
Phys.Rev. D81 (2010) 032002.

4) [Search for Supersymmetry with Gauge-Mediated Breaking in Diphoton Events with Missing Transverse Energy at CDF II.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0910.3606 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 011801.

5) [Search for Anomalous Production of Events with Two Photons and Additional Energetic Objects at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0910.5170 [hep-ex]].
Phys.Rev. D82 (2010) 052005.

6) [Measurements of branching fraction ratios and CP asymmetries in \$B^{+-} \rightarrow D\(\text{CP}\) K^{+-}\$ decays in hadron collisions.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0911.0425 [hep-ex]].
Phys.Rev. D81 (2010) 031105.

7) [Top Quark Mass Measurement using \$m_{T2}\$ in the Dilepton Channel at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0911.2956 [hep-ex]].
Phys.Rev. D81 (2010) 031102.

8) [Search for New Color-Octet Vector Particle Decaying to t anti-t in p anti-p Collisions at \$s^{*\(1/2\)}\$](#)

[= 1.96-TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0911.3112 [hep-ex]].
Phys.Lett. B691 (2010) 183-190.

9) [A Search for the Higgs Boson Using Neural Networks in Events with Missing Energy and b-quark Jets in p anti-p Collisions at \$s^{*\(1/2\)} = 1.96\text{-TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0911.3935 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 141801.

10) [Measurement of the WW+WZ Production Cross Section Using the Lepton+Jets Final State at CDF II.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0911.4449 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 101801.

11) [Search for New Bottomlike Quark Pair Decays \$Q Q\text{-bar} \rightarrow \(t W\text{-}\) \(t\text{-bar} W\text{+-}\)\$ in Same-Charge Dilepton Events.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0912.1057 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 091801.

12) [Search for Pair Production of Supersymmetric Top Quarks in Dilepton Events from p anti-p Collisions at \$S^{*\(1/2\)} = 1.96\text{ TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0912.1308 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 251801.

13) [Search for Technicolor Particles Produced in Association with a W Boson at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0912.2059 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 111802.

14) [A Study of the associated production of photons and b-quark jets in p p-bar collisions at \$s^{*\(1/2\)} = 1.96\text{-TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0912.3453 [hep-ex]].
Phys.Rev. D81 (2010) 052006.

15) [Measurement of the \$\Lambda^0\(b\)\$ Lifetime in \$\Lambda^0\(b\) \rightarrow \Lambda^+\(c\) \pi^-\$ Decays in p p-bar Collisions at \$s^{*\(1/2\)} = 1.96\text{-TeV}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:0912.3566 [hep-ex]].
Phys.Rev.Lett. 104 (2010) 102002.

16) [Measurement of the \$W^+ W^-\$ Production Cross Section and Search for Anomalous \$WW \gamma\$ and \$WWZ\$ Couplings in \$p \bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ -TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:0912.4500 [hep-ex]].

Phys.Rev.Lett. 104 (2010) 201801.

17) [Search for New Physics with a Dijet plus Missing Transverse Energy Signature in \$p \bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:0912.4691 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 131801.

18) [Search for single top quark production in \$p \bar{p}\$ collisions at \$\sqrt{s} = 1.96\$ TeV in the missing transverse energy plus jets topology.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1001.4577 [hep-ex]].

Phys.Rev. D81 (2010) 072003.

19) [Inclusive Search for Standard Model Higgs Boson Production in the \$WW\$ Decay Channel using the CDF II Detector.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1001.4468 [hep-ex]].

Phys.Rev.Lett. 104 (2010) 061803.

20) [Combination of Tevatron searches for the standard model Higgs boson in the \$W+W^-\$ decay mode.](#)

By CDF and D0 Collaboration (T. Aaltonen et al.).

[arXiv:1001.4162 [hep-ex]].

Phys.Rev.Lett. 104 (2010) 061802.

21) [Measurement of the Top Quark Mass and \$p \bar{p} \rightarrow t \bar{t}\$ Cross Section in the All-Hadronic Mode with the CDFII Detector.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1002.0365 [hep-ex]].

Phys.Rev. D81 (2010) 052011.

22) [Measurement of the Top Pair Production Cross Section in the Dilepton Decay Channel in \$p \bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1002.2919 [hep-ex]].

Phys.Rev. D82 (2010) 052002.

23) [Measurement of the \$t \bar{t}\$ Production Cross Section in \$p \bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV using Soft Electron \$b\$ -Tagging.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1002.3783 [hep-ex]].

Phys.Rev. D81 (2010) 092002.

24) [Measurement of W-Boson Polarization in Top-quark Decay in ppbar Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1003.0224 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 042002.

25) [Studying the Underlying Event in Drell-Yan and High Transverse Momentum Jet Production at the Tevatron.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1003.3146 [Unknown]].

Phys.Rev. D82 (2010) 034001.

26) [Measurement of Z \$\gamma\$ Production in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.1140 [hep-ex]].

Phys.Rev. D82 (2010) 031103.

27) [Observation of Single Top Quark Production and Measurement of \$|V_{tb}|\$ with CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.1181 [hep-ex]].

Phys.Rev. D82 (2010) 112005.

28) [First Measurement of the Ratio \$\sigma_{\(t\bar{t}\)} / \sigma_{\(Z/\gamma^* \rightarrow ll\)}\$ and Precise Extraction of the \$t\bar{t}\$ Cross Section.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.3224 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 012001.

29) [Search for R-parity Violating Decays of \$\tau\$ sneutrinos to \$e\mu\$, \$\mu\tau\$, and \$e\tau\$ Pairs in ppbar Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.3042 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 191801.

30) [Measurement of the \$B^0\$ lifetime using a simulation free approach for trigger bias correction.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.4855 [hep-ex]].

Phys.Rev. D83 (2011) 032008.

31) [Search for \$WW\$ and \$WZ\$ resonances decaying to electron, missing \$E_T\$, and two jets in \$p\bar{p}\$ collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1004.4946 [hep-ex]].

Phys.Rev.Lett. 104 (2010) 241801.

32) [Search for the Production of Scalar Bottom Quarks in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1005.3600 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 081802.

33) [Combined Tevatron upper limit on \$g_{gg} \rightarrow H \rightarrow W^+W^-\$ and constraints on the Higgs boson mass in fourth-generation fermion models.](#)

By CDF and D0 Collaboration (T. Aaltonen et al.).

[arXiv:1005.3216 [hep-ex]].

Phys.Rev. D82 (2010) 011102.

34) [Measurement of \$d\sigma/dy\$ of Drell-Yan \$e^+e^-\$ pairs in the \$Z\$ Mass Region from \$p\bar{p}\$ Collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (Timo Antero Aaltonen et al.).

[arXiv:0908.3914 [hep-ex]].

Phys.Lett. B692 (2010) 232-239.

35) [Exclusion of an Exotic Top Quark with \$-4/3\$ Electric Charge Using Soft Lepton Tagging.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1006.4597 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 101801.

36) [Study of multi-muon events produced in \$p\$ anti- \$p\$ interactions at \$s^{1/2} = 1.96\$ -TeV.](#)

By T. Aaltonen, J. Adelman, B. Alvarez Gonzalez, S. Amerio, D. Amidei, A. Anastassov, J. Antos, G. Apollinari et al.

Eur.Phys.J. C68 (2010) 109-118.

37) [Measurement of the \$t\bar{t}\$ Production Cross Section with an in situ Calibration of \$b\$ -jet Identification Efficiency.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1007.4423 [hep-ex]].

Phys.Rev. D83 (2011) 071102.

38) [Diffractive \$W\$ and \$Z\$ Production at the Fermilab Tevatron.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1007.5048 [hep-ex]].

Phys.Rev. D82 (2010) 112004.

39) [Direct Top-Quark Width Measurement CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1008.3891 [hep-ex]].

Phys.Rev.Lett. 105 (2010) 232003.

40) [Measurement of the \$WW+WZ\$ Production Cross Section Using a Matrix Element Technique](#)

[in Lepton + Jets Events.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1008.4404 [hep-ex]].
Phys.Rev. D82 (2010) 112001.

41) [Updated Search for the Flavor-Changing Neutral-Current Decay \$D^0 \rightarrow \mu^+ \mu^- S\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1008.5077 [hep-ex]].
Phys.Rev. D82 (2010) 091105.

42) [Search for the supersymmetric partner of the top quark in ppbar collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1009.0266 [hep-ex]].
Phys.Rev. D82 (2010) 092001.

43) [Improved Search for a Higgs Boson Produced in Association with \$Z \rightarrow l+l^-\$ in proton antiproton Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1009.3047 [hep-ex]].
Phys.Rev.Lett. 105 (2010) 251802.

44) [Top Quark Mass Measurement in the Lepton + Jets Channel Using a Matrix Element Method and *in situ* Jet Energy Calibration.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1010.4582 [hep-ex]].
Phys.Rev.Lett. 105 (2010) 252001.

45) [Search for Randall-Sundrum Gravitons in the Diphoton Channel at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1012.2795 [hep-ex]].
Phys.Rev. D83 (2011) 011102.

46) [Measurement of b hadron lifetimes in exclusive decays containing a \$J/\psi\$ in p-pbar collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1012.3138 [hep-ex]].
Phys.Rev.Lett. 106 (2011) 121804.

47) [Measurement of \$t\bar{t}\$ Spin Correlation in \$p\bar{p}\$ Collisions Using the CDF II Detector at the Tevatron.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1012.3093 [hep-ex]].
Phys.Rev. D83 (2011) 031104.

48) [Search for a New Heavy Gauge Boson \$W'\$ with Electron + missing ET Event Signature in](#)

[\$p\bar{p}\$ collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1012.5145 [hep-ex]].

Phys.Rev. D83 (2011) 031102.

49) [Evidence for a Mass Dependent Forward-Backward Asymmetry in Top Quark Pair Production.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.0034 [hep-ex]].

Phys.Rev. D83 (2011) 112003.

50) [Measurement of the Forward-Backward Asymmetry in the \$B^0 \rightarrow K^{\(*\)} \mu^+ \mu^-\$](#)

[Decay and First Observation of the \$B^0 \rightarrow \phi \mu^+ \mu^-\$ Decay.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.1028 [hep-ex]].

Phys.Rev.Lett. 106 (2011) 161801.

51) [Production of \$\Lambda\$, \$\bar{\Lambda}\$, \$\Xi^\pm\$ and \$\Omega^\pm\$ Hyperons in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.2996 [hep-ex]].

52) [Search for High Mass Resonances Decaying to Muon Pairs in \$\sqrt{s}=1.96\$ TeV \$p\bar{p}\$ Collisions.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.4578 [hep-ex]].

Phys.Rev.Lett. 106 (2011) 121801.

53) [Measurement of the Top Quark Mass in the Lepton+Jets Channel Using the Lepton Transverse Momentum.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.4926 [hep-ex]].

Phys.Lett. B698 (2011) 371-379.

54) [Search for heavy bottom-like quarks decaying to an electron or muon and jets in \$p\bar{p}\$ collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1101.5728 [hep-ex]].

Phys.Rev.Lett. 106 (2011) 141803.

55) [Search for the Higgs boson in the all-hadronic final state using the CDF II detector.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1102.0024 [hep-ex]].

Submitted to: Phys.Rev.Lett..

56) [Observation of the \$Y\(4140\)\$ structure in the \$J/\psi \psi \phi\$ Mass Spectrum in \$B^0 \rightarrow J/\psi \phi\$ decays.](#)

By The CDF Collaboration (T. Aaltonen et al.).
[arXiv:1101.6058 [hep-ex]].

57) [Observation of \$B^0 \rightarrow J/\psi K^{*0}\$ \(892\) and \$B^0 \rightarrow J/\psi K^*_S\$ Decays.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1102.1961 [hep-ex]].
Phys.Rev. D83 (2011) 052012.

58) [Search for New Heavy Particles Decaying to \$ZZ \rightarrow \ell\ell\ell\ell, \ell\ell jj\$ in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1102.4566 [hep-ex]].
Phys.Rev. D83 (2011) 112008.

59) [Measurement of the \$B_s\$ Lifetime in Fully and Partially Reconstructed \$B_s \rightarrow D_s^-\(\phi \rightarrow \pi^-\pi^+\)X\$ Decays in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1103.1864 [hep-ex]].
Submitted to: Phys.Rev.Lett..

60) [Search for Production of Heavy Particles Decaying to Top Quarks and Invisible Particles in \$p\bar{p}\$ collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1103.2482 [hep-ex]].
Phys.Rev.Lett. 106 (2011) 191801.

61) [Limits on Anomalous Trilinear Gauge Couplings in \$Z\gamma\$ Events from \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1103.2990 [hep-ex]].
Phys.Rev.Lett. 107 (2011) 051802.

62) [Measurement of the mass difference between \$t\$ and \$\bar{t}\$ quarks.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1103.2782 [hep-ex]].
Phys.Rev.Lett. 106 (2011) 152001.

63) [Combined CDF and D0 Upper Limits on Standard Model Higgs Boson Production with up to 8.2 fb⁻¹ of Data.](#)

By CDF and D0 Collaboration (T. Aaltonen et al.).
[arXiv:1103.3233 [hep-ex]].

64) [Measurement of the Top Pair Production Cross Section in the Lepton + Jets Channel Using a Jet Flavor Discriminant.](#)

By CDF Collaboration (T. Aaltonen et al.).
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65) [Search for New Dielectron Resonances and Randall-Sundrum Gravitons at the Collider Detector at Fermilab.](#)

By CDF Collaboration (T. Aaltonen et al.).
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By CDF Collaboration (T. Aaltonen et al.).
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72) [Search for a Very Light CP-Odd Higgs Boson in Top Quark Decays from \$p\bar{p}\$ Collisions at 1.96 TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

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73) [Top quark mass measurement using the template method at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
[arXiv:1105.0192 [hep-ex]].
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74) [Measurement of the \$t\bar{t}\$ production cross section in \$p\bar{p}\$ collisions at \$\sqrt{s}=1.96\$ TeV using events with large Missing \$E_T\$ and jets.](#)

By CDF Collaboration (T. Aaltonen et al.).
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75) [First Search for Multijet Resonances in \$\sqrt{s} = 1.96\$ TeV \$p\bar{p}\$ Collisions.](#)

By CDF Collaboration (T. Aaltonen et al.).
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76) [Measurements of the properties of \$\Lambda_c\(2595\)\$, \$\Lambda_c\(2625\)\$, \$\Sigma_c\(2455\)\$, and \$\Sigma_c\(2520\)\$ baryons.](#)

By CDF Collaboration (T. Aaltonen et al.).
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77) [Measurement of branching ratio and \$B_s^0\$ lifetime in the decay \$B_s^0 \rightarrow J/\psi f_0\(980\)\$ at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).
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78) [Evidence for \$t\bar{t}\gamma\$ Production and Measurement of \$\sigma_{t\bar{t}\gamma} / \sigma_{t\bar{t}}\$.](#)

By CDF Collaboration (T. Aaltonen et al.).
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79) [Search for Higgs Bosons Produced in Association with b-Quarks.](#)

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80) [Measurement of the Cross Section for Prompt Isolated Diphoton Production in \$p\bar{p}\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

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By CDF Collaboration (T. Aaltonen et al.).

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82) [Study of Substructure of High Transverse Momentum Jets Produced in Proton-Antiproton Collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1106.5952 [hep-ex]].

83) [Search for \$B_s \rightarrow \mu^+\mu^-\$ and \$B_d \rightarrow \mu^+\mu^-\$ Decays with CDF II.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.2304 [hep-ex]].

84) [Observation of the Baryonic Flavor-Changing Neutral Current Decay \$\Lambda_b^0 \rightarrow \Lambda \mu^+ \mu^-\$.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.3753 [hep-ex]].

85) [Search for new physics in \$t\bar{t} \rightarrow b\bar{b}q\bar{q}q\bar{q} + \text{met}\$ final state in \$\bar{p}p\$ collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

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86) [Observation of the \$\Xi_b^0\$ Baryon.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.4015 [hep-ex]].

Submitted to: Phys.Rev.Lett..

87) [Search for a Heavy Top-Like Quark in \$\bar{p}p\$ Collisions at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.3875 [hep-ex]].

Submitted to: Phys.Rev.Lett..

88) [Measurement of Polarization and Search for CP-Violation in \$B_s^0 \rightarrow \phi\phi\$ Decays.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.4999 [hep-ex]].

89) [A search for resonant production of \$t\bar{t}\$ pairs in \$4.8 \text{ fb}^{-1}\$ of integrated luminosity of \$\bar{p}p\$ collisions at \$\sqrt{s}=1.96 \text{ TeV}\$.](#)

By The CDF Collaboration (T. Aaltonen et al.).

[arXiv:1107.5063 [hep-ex]].

90) [Search for new physics in high \$p_T\$ like-sign dilepton events at CDF-II.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.0101 [hep-ex]].

Submitted to: Phys.Rev.Lett..

91) [Measurements of the Angular Distributions in the Decays \$B \rightarrow K^{\(*\)} \mu^+ \mu^-\$ at CDF.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.0695 [hep-ex]].

92) [Measurement of the top-quark mass in the lepton+jets channel using a matrix element technique with the CDF II detector.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.1601 [hep-ex]].

Submitted to: Phys.Rev.D.

93) [Search for \$WZ+ZZ\$ production with MET + jets with \$b\$ enhancement at \$\sqrt{s} = 1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.2060 [hep-ex]].

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94) [Search for resonant production of \$t\bar{t}\$ decaying to jets in \$p\bar{p}\$ collisions at \$\sqrt{s}=1.96\$ TeV.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.4755 [hep-ex]].

95) [Measurements of branching fraction ratios and CP-asymmetries in suppressed \$B^0 \rightarrow D^0\(\rightarrow K^+ \pi^-\) K^0\$ and \$B^0 \rightarrow D^0\(\rightarrow K^+ \pi^-\) \pi^0\$ decays.](#)

By CDF Collaboration (T. Aaltonen et al.).

[arXiv:1108.5765 [hep-ex]].

Submitted to: Phys.Rev.D.

E665 (23 Publications)
1990-2000

BC72/73 (14 Publications)
(1982-1991)

COMPUTING

DHPEP Study Group, **Data Preservation in High Energy Physics**,
e-Print: **arXic:0912.0255v1**, December 1, 2009

Scenarios for long-term analysis.

Stephen Wolbers, (Fermilab) . FERMILAB-CONF-09-073-CD, Jan 2009. 5pp.
Presented at 1st Workshop on Data Preservation and Long Term Analysis in HEP, DESY,
Hamburg, Germany, 26-28 Jan 2009.

A multi-purpose computing center: FNAL.

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Hamburg, Germany, 26-28 Jan 2009.

Baranovski *et al.* "CDF II production farm project", FERMILAB-PUB-06-437-E, Dec 2006.
Published in **Nucl.Instrum.Meth.A572:399-401,2007.**

J. Antos *et al.* "Data processing model for the CDF experiment". FERMILAB-PUB-06-169-CD-E,
Jun 2006.

Published in **IEEE Trans.Nucl.Sci.53:2897-2906,2006.**

e-Print: **physics/0606042**

J.Antos *et al.*, "Data production models for the CDF experiment," arXiv:physics/0606039.

J. Antos *et al.* [CDF - Run II Collaboration], "Data processing model for the CDF experiment,"
arXiv:physics/0606042.

'Design and First Tests of the CDF Run 2 Farms', Jaroslav Antos, *et al.*, presented at CHEP2000,
Padova, Italy, February 7-11, 2000 (FERMILAB-Conf-00/095), Comp. Phys. Comm. **140**: 239
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Stephen Wolbers, Strategic Directions of Computing at Fermilab, Comp. Phys. Comm. **110**: 1285
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R. Cudzewicz, *et al.*, Next Generation Farms at Fermilab, Computer Physics Communications **110**:
1317 (1998).

Elizabeth Anderson, *et al.*, A Virtual Library of Technical Publications, Presented at 6th
International World Wide Web Conference, Santa Clara, CA 7-12 Apr, 1997 and at Inforum'97,
Oak Ridge TN, 6-8 May, 1997, FERMILAB-TM-2004-REV, October, 1997.

Frank Rinaldo, Stephen Wolbers, Loosely Coupled Parallel Processing at Fermilab, Computers in
Physics, Vol 7, 184-190 (March/April, 1993). FERMILAB-Pub-93-006.

ACCELERATOR (5 publications, 2005-2007)

INTERNAL NOTES

ACCELERATOR INSTRUMENTATION
(39 Documents, found in Fermilab beams-doc-DB)

CDF Notes
(23 documents, found in CDF notes)

GENERAL COMPUTING NOTES
(80 Notes in CD-doc-DB + 9 notes in Fermilab Publications System)

E665
(160 Notes, 1985-1996)

BC 72/73
(25 Notes, 1980-1984)

RECENT CONFERENCE/SEMINAR PRESENTATIONS

‘Lustre File System Evaluation at FNAL’, CHEP2009, Prague, Czech Republic, March 21-27, 2009.

‘A Multi-Purpose Computing Center : FNAL’, First Workshop on Data Preservation and Long Term Data Analysis in High Energy Physics, DESY, January 26-28, 2009.

‘Scenarios for Long-Term Data Analysis’, First Workshop in Data Preservation and Long Term Data Analysis in High Energy Physics, DESY, January 26-28, 2009.

COMMITTEE, CONFERENCE AND REVIEW ASSIGNMENTS

1. Member, 8mm/Serial Media Working Group, Computing Division, 1990.
2. Member, Word Processing Subcommittee, 1985.
3. Member, Ad-Hoc Committee on the Common File Server, 1989.
4. Member, SDSS software review, 1992 and 1996.
5. Member and co-leader, Fermilab Publications Fileserver Committee 1995-present
6. Member, CDF godparents review committee: Upgrade Software, 1996.
7. Member, Fermilab Computer Security Working Group, 1998-2002.
8. Member, Run II Joint CDF/D0/CD Committee 1996-2002.
9. Member, LHCC Consultants Group (LCG) to review Computing for the LHC experiments, January, 1997 -- January, 2000*.
10. Member, RHIC Computing Review Committee, 1997-2000*.
11. Member, Fermilab Policy Manual Working Group, 1998.
12. Chair, Fermilab BSS Critical Systems Working Group, June-December, 1999.
13. Chair, Fermilab Beams Critical Systems Working Group, June-December, 1999.
14. Member, Brookhaven US ATLAS Project Advisory Panel, Jan, 2000-present*.
15. Organizer, NSS Conference, Lyon, France, October, 2000.*
16. Co-convener, Commodity Hardware and Software Session, CHEP2000, Padova, Italy, February, 2000.
17. Co-convener, Commodity Hardware and Software Session, CHEP2001, Beijing, China, 3-7 Sept, 2001.
18. Member, Compensation Committee (headed by Kay Van Vreede of Lab Services), Feb, 2000 to early 2001.
19. Member, Organizing Committee for the Fermi Centennial (headed by Chris Quigg and Jeff Appel), May, 2001-September, 2001.

20. Member, URA Thesis Award Committee, 2002-2006.
21. Chair, URA Thesis Award Committee, 2003-2006.
22. Member, Run 2 committee, 2002.
23. Member, many Associate Scientist (CD) search committees.
24. Member, High Risk Property Committee (FNAL), 2004-present.
25. Chair, Commodity Node Procurement Task Force (CD), 2005.
26. Member, Fermilab Committee on Scientific Appointments, 2005-2008.
Chair, 2007-2008.
27. Member of ILC RDR effort on Controls. 2006-2007.
28. CDF godparent (publication review committee), Ratio of χ_{c2}/χ_{c1} cross sections, 2006-2007.
29. CDF godparent, chair, D^0 - D^0 bar mixing, 2007.
30. Member, Workforce Restructure Task Force, 2008.
31. CDF godparent, chair, $B^+ \rightarrow D^0(CP) K^+$, 2008-2009.
32. Member, Task Force on Data Preservation and Long Term Data Analysis in High Energy Physics. 2009-present.*
33. Fermilab Committee for Hiring and Retaining Scientific Staff (chair) 2009. Part of the Diversity Council.
34. Member of the Evaluation and Survey Committee Committee of the IN2P3 Computing Center, 2009-present.*
35. Member of ARRA panel for DOE University HEP programs, July, 2009.
36. Chair, DOE panel on Transatlantic Networking, 2010.*
37. CDF godparent, chair, $B_s \rightarrow J/\Psi K^*$ and $B_s \rightarrow J/\Psi K_s$, 2010.
38. CDF godparent, chair, $B^- \rightarrow D^0 K^+$ suppressed decays, 2011.
39. Chair, Scientific Computing Division Search Committee, 2011.

* External Committee

TRAINING

1. Supervisory Training (for group leaders), Fermilab, January-April, 1993.
 2. Fast Track to Objects, January 6, 1999.
 3. C++ for non-C Programmers, January 22-March 5, 1999.
 4. Leadership/Management Training, given by the MRA - the Northern Illinois Business Association, March-April, 1999.
 5. Performance Appraisal Training -- Supervisors, March 7, 2002.
 6. Interaction Management Training -- July 28, 2005 - October, 2005.
 7. Fermilab Leadership Essentials, May 5, 2006.
 8. Rad Worker Training, as needed. Last instance October 29, 2008.
 9. Stress Management Training, October 10, 2007.
 10. Manager and Supervisor Layoff Notification Training, April 29, 2008.
 11. Managing within the law, May 7, 2009.
 12. Behavioral Interviewing, May 14, 2009.
 13. U. of Chicago Strategic Laboratory Leadership Program, May-November, 2010.
- Numerous specific training for ergonomics, controlled access, workstation, computer security, etc.

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