July 15, 2010

I have divided my papers into two categories: 1) Primary Publications, for which I played a primary role, and 2) Other Publications, for which I played a substantial role in building the detector and acquiring the data (in the case of CDF, largely through my role with the trigger and data access work), and feel knowledgable about the technical aspects of the paper. More recently, as CDF has grown in size, I have adopted the ‘opt-in’ policy of not being on the default author list, but instead having to specifically ask that my name be added to the list of CDF authors for a paper.

1 Primary Publications:

1. A Search for the Decays $K^0_L \rightarrow \mu^+\mu^-, e^+e^-, \mu^\pm e^\pm, \ (\text{with A. Clark et al.}), \text{Phys. Rev. Lett.} \ 26, \ 1661 \ (1971)$.


3. Neutrino Mass Limits from the $K^0_L \rightarrow \pi^\pm e^\pm \nu$ Decay Spectrum, (with A. Clark et al.), Phys. Rev. $D3, \ 533 \ (1972)$.

4. Search for Fine Structure in the $K^0_L$ Final States, Nature $237, \ (\text{with A. Clark et al.}), \ 338 \ (1973)$.

5. Production of Hadrons with Large Transverse Momentum at 200 and 300 GeV, (with J. Cronin et al.), Phys. Rev. Lett. $31, \ 1426 \ (1973)$.


9. Measurement of the Branching Ratio $\Gamma(K^0_L \rightarrow \pi^+\pi^-)/\Gamma(K^0_L \rightarrow \text{all})$, (with R. Devoe et al.), Phys. Rev. $D16, \ 565 \ (1977)$.


11. Production of $\pi^+$ and $\pi^-$ at Large Transverse Momentum in p-p and p-d Collisions at 200, 300, and 400 GeV, (with D. Antreasyan et al.), Phys. Rev. Lett. $38, \ 112 \ (1977)$.


17. Production of Hadrons at Large Transverse Momentum in 200, 300, and 400 GeV $\pi$-p and $\pi$-nucleus Collisions, (with D. Antreasyan et al.), Phys. Rev. $D19, \ 764 \ (1979)$. 1

20. The Production of $\pi^\pm$, $K^\pm$, $p$ and $\bar{p}$ at Large $p_T$ in 200 and 300 GeV $\pi$-p Collisions, (with N. Giokaris et al.), Phys. Rev. Lett. 44, 511 (1980).


41. Search for the Top Quark in the Reaction $\bar{p}p \rightarrow \text{Electron + Jets}$ at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 64, 142 (1990).

42. Measurement of the Ratio $\sigma(W \rightarrow ev)/\sigma(Z \rightarrow ee)$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with P. Derwent,1 F. Abe et al.), Phys. Rev. Lett. 64, 152 (1990).


45. Measurement of $\sigma \cdot B(W \rightarrow e\nu)$ and $\sigma \cdot B(Z^0 \rightarrow e^+ e^-)$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1800$ GeV, The CDF Collaboration (with K. Bloom,2 F. Abe et al.), Phys. Rev. Lett. 67, 2418 (1991).

46. Search for $W' \rightarrow e\nu$ and $W' \rightarrow \mu\nu$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 67, 2609 (1991).


48. Search for $W' \rightarrow e\nu$ and $W' \rightarrow \mu\nu$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 68, 3398 (1992).

49. Search for the Top Quark Decaying to a Charged Higgs Boson in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 73, 2667 (1994).


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1graduate student
2undergraduate student
62. Measurement of the Ratio $\sigma_B(\bar{p}p \rightarrow W \rightarrow e\nu)/\sigma_B(\bar{p}p \rightarrow Z^0 \rightarrow ee)$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with S. Kopp, F. Abe et al.), Phys. Rev. D52, 2624 (1995).

63. Measurement of $\sigma_B(W \rightarrow e\nu)$ and $\sigma_B(Z^0 \rightarrow e^+e^-)$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with S. Kopp, F. Abe et al.), Phys. Rev. Lett. 76, 3070 (1996).


65. The $\mu\tau$ and $e\tau$ Decays of Top Quark Pairs Produced in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with M. Hohlmann, F. Abe et al.), Phys. Rev. Lett. 79, 3585 (1997).


68. Measurement of the $t\bar{t}$ Production Cross-Section in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 79, 2773 (1998).


70. Measurement of the Top Quark Mass and $t\bar{t}$ Production Cross-Section from Dilepton Events at the Collider Detector at Fermilab, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 80, 2767 (1998).


72. The Search for Supersymmetry at the Tevatron Collider, (with M. Carena, (Fermilab), R.L. Culbertson (UC), S. Eno (Maryland), and S. Mrenna (ANL)), hep-ex/9712022, to appear in the book “Perspectives in Supersymmetry,” edited by G.L. Kane, World Scientific.

73. The Search for Supersymmetry at the Tevatron Collider, (with M. Carena et al.), to be published in Reviews of Modern Physics.


75. Search for Narrow Diphoton Resonances and for $\gamma\gamma + W/Z$ Signatures in $\bar{p}p$ Collisions at $\sqrt{s}=1.8$ TeV; (with A. Castro, P. Wilson, and T. Affolder, et al.; CDF collaboration) Phys. Rev. D64 (2001) 092002.


85. Limits on Extra Dimensions and New Particle Production in the Photon and Missing Energy Signature in $p\bar{p}$ Collisions at roots = 1.8 TeV at CDF (with P. Onyisi and the CDF Collaboration); EFI preprint EFI-01-53; Phys. Rev. Lett. 89(2002) 281801

86. Search for New Physics in Photon-Lepton Events in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV (with J. Berryhill and the CDF Collaboration); Phys. Rev. Lett. 89, 041802 (2002).

87. Initial Experience with the CDF SVT trigger, NIM, 501, 1:21, March 2003, P. 201-206 (with B. Ashmanskas, A. Barchiesi, A. Bardi, M. Bari, M. Baumgart, Stefano Belforte, J. Berryhill, M. Bogdan, R. Carosi, A. Cerri et al.).


97. “Search for New Physics in Photon-Lepton+X Events with 305 pb$^{-1}$of $p\bar{p}$ Collisions at $\sqrt{s}= 1.96$ TeV”, with A. Loginov et al. [CDF Collaboration]; Phys. Rev. Lett. 97:031801,2006; hep-ex/0605097

98. “Search for New Physics in Lepton + Photon + X Events with 929 pb$^{-1}$ of ppbar Collisions at $\sqrt{s} = 1.96$TeV” A.Abulencia et al. (CDF Collaboration); Phys. Rev. D 75, 112001 (2007) Archive: hep-ex/0702029

100. “Transmission-Line Readout with Good Time and Space Resolutions for a Planicon MCP-PMT”;
Fukun Tang et al.;
Poster presented at the Topical Workshop on Electronics for Particle Physics (TWEPP), Prague, Czech Republic, Sept., 2007.

101. “Search for New Physics in Lepton + Photon + X Events With 929 pb**(-1) of p anti-p Collisions at
s**(1/2) = 1.96-TeV.”;
The CDF Run II Collaboration (A. Abulencia et al.).

Gary Drake et al.;
Submitted to IEEE08, October, 2008; Dresden Germany

Fukun Tang et al.;
Submitted to IEEE08, October, 2008; Dresden Germany

104. “Results of a Search for Heavy, Right-handed Quarks in Dileptons+X”;
with Collin Wolfe and the CDF Run II Collaboration (A. Abulencia et al.).
To be submitted to Phys. Rev. D.
(in the process of internal CDF review as of Dec. 2007, but available on request.).

105. “Pico-second Resolution Timing Measurements”,
e-Print: arXiv:0810.5590 [physics.ins-det]

106. “Searching the Inclusive $\ell\gamma E_t + b – quark$ Signature for Radiative Top Quark Decay and Non-standard-model Processes”;
with I. Shreyber, A. Loginov, et al. [CDF Collaboration];
Physical Review D (Vol.80, No.1):1 July 2009
URL: http://link.aps.org/abstract/PRD/v80/e011102

107. “Search for the Neutral Current Top Quark Decay $t \rightarrow Zc$ Using Ratios of Z+4 Jets to W+4 Jets Production”,
with A. Paramonov et al. [CDF Collaboration];
Phys. Rev. D80,052001 (Aug., 2009);
eprint: arXiv:0905.0277

108. “Transmission-line readout with good time and space resolutions for Planicon MCP-PMTs”;

109. “Level-3 Calorimetric Resolution available for the Level-1 and Level-2 CDF Triggers”;
Anadi Canepa et al. (CDF Collaboration); FERMILAB-CONF-08-655-PPD, PIC-2008-0040, Jun 2008;

110. “Development of Pico-second-resolution Large-area Time-of-flight Systems”;


2 Other Publications:


6. \( K_S^0 \) Production in \( \bar{p}p \) Interactions at \( \sqrt{s} = 630 \) and 1800 GeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. D40, 3791 (1989).


23. Limit on the Rare Decay $W^\pm \rightarrow \gamma\pi^\pm$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 69, 2160 (1992).


25. Inclusive $J/\psi, \psi(2S)$ and b-quark Production in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 69, 3704 (1992).


32. Search for $A_0 \rightarrow J/\psi \Lambda^0$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. D47, R2639 (1993).


38. Observation of the Decay $B_0^s \rightarrow J/\psi \phi$ in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 71, 1685 (1993).


45. Search for the Top Quark Decaying to a Charged Higgs Boson in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 72, 1977 (1994).


47. W Boson + Jet Angular Distribution in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 73, 2296 (1994).

48. Precision Measurement of the Prompt Photon Cross Section in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 73, 2662 (1994).


60. Limits on WWZ and WWγ Couplings from WW and WZ Production in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 75, 1017 (1995).


64. Search for the Rare Decay $W^\pm \rightarrow \pi^\pm + \gamma$, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 76, 2852 (1996).


70. Measurement of the $\gamma + D^{\ast\pm}$ Cross Section in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 77, 5005 (1996).


76. Search for Third Generation Leptoquarks in $\bar{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 78, 2906 (1997). F. Abe et al..
92. Search for the Rare Decay $W^\pm \rightarrow \pi^\pm + \gamma$ in Proton - Anti-Proton Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 80, 2525 (1998).
93. Search for the Rare Decay $W^\pm \rightarrow D^\pm(S)\gamma$ in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration, (with F. Abe et al.), Phys. Rev. D58, 091101 (1998).
94. Measurement of the $\sigma(W^+ >= 1Jet)/\sigma(W)$ Cross-Section Ratio from $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV, The CDF Collaboration (with F. Abe et al.), Phys. Rev. Lett. 81, 1367-1372 (1998).


100. Kinematics of $t\bar{t}$ Events at CDF, The CDF Collaboration (with F. Abe et al.), Phys. Rev. D63, 032003(2001).

101. Measurement of the Top Quark Mass with the Collider Detector at Fermilab; (with the CDF Collaboration); Phys.Rev.D63, 032003(2001).


103. Search for Gluinos and Scalar Quarks in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV using the Missing Energy plus Multijets Signature; (M. Spiropulu, lead author: The CDF Collaboration); EFI-01-22, FERMILAB-PUB-01-084-E; Phys. Rev. Lett. 88, 041801(2002).

104. Comparison of the Direct Photon Cross Sections at $\sqrt{s}$=1.8 TeV and $\sqrt{s}$=0.63 GeV; (Dana Partos and Stephen Kuhlmann, lead authors: The CDF Collaboration); Submitted to Phys. Rev. Lett.

105. Measurement of the Mass Difference $m(D^+)-m(D^0)$; (Bill Ashmanskas and Paul Harr, lead authors: The CDF II Collaboration); Phys.Rev.D68:072004,2003

106. Search for the Flavor Changing Neutral Current Decay $D^0 \rightarrow \mu^+\mu^-$ in p anti-p Collisions at $s^{*}(1/2) = 1.96$-TeV; CDF Collaboration (D. Acosta et al.); Phys.Rev.D68:091101,2003


108. Search for $B^0_s \rightarrow \mu^+\mu^-$ and $B^0_s \rightarrow \mu^+\mu^-$ Decays in p anti-p Collisions at $s^{*}(1/2) = 1.96$-TeV; CDF Collaboration (D. Acosta et al.); Phys.Rev.Lett.93:032001,2004


110. “Search for Higgs Bosons Decaying Into b anti-b and Produced In Association With a Vector Boson in proton antiproton Collisions at s**(1/2) = 1.8-TeV”; D. Acosta et al. [CDF Collaboration]; Phys. Rev. Lett. 95, 051801 (2005)


121. “Observation of B0(s) - anti-B0(s) Oscillations”; CDF Collaboration (A. Abulencia et al.); Phys.Rev.Lett.97:242003,2006; Archive: hep-ex/0609040

122. “Measurement of the B0(s) - anti-B0(s) Oscillation Frequency”; CDF Collaboration (A. Abulencia et al.); Phys.Rev.Lett.97:062003,2006; Archive: hep-ex/0606027

123. End of ‘other publications’- see Primary publications above

3 US Patents

   Inventors: Henry J. Frisch, Harold Sanders, Fukun Tang, Tim Credo


3. USE OF FLAT PANEL MICROCHANNEL PHOTOMULTIPLIERS IN SAMPLING CALORIMETERS WITH TIMING; Chin-Tu Chen, Woon-Seng Choong, Henry J. Frisch, Jean-Francois Genat, Chien-Min Kao, Heejong Kim, and Fukun Tang, Inventors; Provisional application ANL-IN-09-017 filed.