

Robert Craig Group

PUBLICATION LIST

Recent Publications in Refereed Journals

- [1] “*First measurement of electron neutrino appearance in NOvA*”, Phys.Rev.Lett. 116, 151806 (2016)
- [2] “*First measurement of muon-neutrino disappearance in NOvA*”, Accepted for publication in PRD, Phys. Rev. D. 93, 051104 (2016)
- [3] “*A Study of the Energy Dependence of the Underlying Event in Proton-Antiproton Collisions*”, Phys. Rev. D. 92, 092009 (2015)
- [4] “*Tevatron Constraints on Models of the Higgs Boson with Exotic Spin and Parity Using Decays to Bottom-Antibottom Quark Pairs*”, Phys. Rev. Lett. 114, 151802 (2015)
- [5] “*Constraints on models of the Higgs boson with exotic spin and parity using the full CDF data set*”, Phys. Rev. Lett. 114, 141802 (2015)
- [6] “*Observation of s-channel production of single top quarks at the Tevatron*”, Phys. Rev. Lett. 112, 231803 (2014)
- [7] “*Evidence for s-channel Single-Top-Quark Production in Events with one Charged Lepton and two Jets at CDF*”, Phys. Rev. Lett. 112, 231804 (2014)
- [8] “*First Search for Exotic Z Boson Decays into Photons and Neutral Pions in Hadron Collisions*”, Phys. Rev. Lett. 112, 111803 (2014)
- [9] “*Higgs Boson Studies at the Tevatron*”, Phys. Rev. D. 88, 052014 (2013)
- [10] “*Combination of Searches for the Higgs Boson Using the Full CDF Data Set*”, Phys. Rev. D. 88, 052013 (2013)
- [11] “*Search for Resonant Top-antitop Production in the Semi-leptonic Decay Mode Using the Full CDF Data Set*”, Phys. Rev. Lett. 110, 121802 (2013)
- [12] “*Evidence for a particle produced in association with weak bosons and decaying to a bottom-antibottom quark pair in Higgs boson searches at the Tevatron*”, Phys. Rev. Lett. 109, 071804 (2012)
- [13] “*Search for a Higgs boson in the diphoton final state using the full CDF data set*”, Physics Letters B 717 (2012) 173181
- [14] “*Combined search for the standard model Higgs boson decaying to a bb pair using the full CDF data set*”, Phys. Rev. Lett. 109, 111802 (2012)
- [15] “*Search for the standard model Higgs boson decaying to a bb pair in events with one charged lepton and large missing transverse energy using the full CDF data set*”, Phys. Rev. Lett. 109, 111804 (2012)

- [16] “Search for the standard model Higgs boson produced in association with a W^\pm boson with 7.5 fb^{-1} ”, Phys. Rev. D. 86, 032011 (2012)
- [17] “Search for a Higgs Boson in the Diphoton Final State in $p\bar{p}$ at $\sqrt{s} = 1.96 \text{ TeV}$ ”, Phys. Rev. Lett. 108, 011801 (2012)
- [18] “Search for a Higgs Boson produced in Association with a W Boson Using a Method Based on Matrix Element Techniques”, Phys. Rev. D. 85, 072001 (2012)

Past Publications in Refereed Journals

- [1] “Observation of Single Top Quark Production and Measurement of V_{tb} with CDF”, Phys. Rev. D. 82, 112005 (2010)
- [2] “Measurement of the $WW+WZ$ Production Cross Section Using a Matrix Element Technique in Lepton + Jets Events”, Phys. Rev. D. 82, 112001 (2010)
- [3] “Studying the Underlying Event in Drell-Yan and High Transverse Momentum Jet Production at the Tevatron”, Phys. Rev. D. 82, 034001 (2010)
- [4] “Measurement of the WW and WZ production cross section in $\ell\nu jj$ ”, Phys. Rev. Lett. 104, 101801 (2010)
- [5] “Search for Standard Model Higgs Bosons in $WH \rightarrow \ell\nu b\bar{b}$ ”, Phys. Rev. Lett. 103, 101802 (2009)
- [6] “Observation of Single Top Quark Production”, Phys. Rev. Lett. 103, 092002 (2009)
- [7] “Search for a Fermiophobic Higgs Boson Decaying into Diphotons at CDF”, Phys. Rev. Lett. 103, 061803 (2009)
- [8] “Measurement of Single Top Quark Production at CDF”, Phys. Rev. Lett. 101, 250601 (2008)
- [9] “The Inclusive Jet Cross Section Using the Midpoint Algorithm in RunII at CDF”, Phys. Rev. D78, 052006 (2008)

Please note that in addition to my primary publications listed above, I have been a member of the CDF author list since January 2006 with almost 400 publications and almost 20,000 citations (based on the SPIRES - High-Energy Physics Literature Database). I have also made major contributions to more than 100 unpublished notes documenting my work for the CDF, Mu2e, and NOvA collaborations. A complete list of publications can be supplied upon request.

Recent Conference Proceedings and Non-refereed Publications

- [1] “*Progress in the Search for Dark Matter Using Upward-going Muons in NOvA*”, ICHEP 2016
- [2] “*Performance of Wavelength-Shifting Fibers for the Mu2e Cosmic Ray Veto Detector*”, DPF 2015, arXiv:1511.06225
- [3] “*Performance of Scintillator Counters with Silicon Photomultiplier Readout*”, DPF 2015, arXiv:1511.00374
- [4] “*A first look at data from the NOA upward-going muon trigger*”, DPF 2015, arXiv:1511.00155
- [5] “*Fermilab Computing at the Intensity Frontier*”,
Conference on Computing in High Energy Physics (CHEP2015), J. Phys. Conf. Ser. 664 (2015) 3, 032012
- [6] “*Implementation of an Upward-going Muon Trigger for Indirect Dark Matter Searches at the NOvA Far Detector*”, Conference on Computing in High Energy Physics (CHEP2015), J. Phys. Conf. Ser. 664 (2015) 082034
- [7] “*Recent Evolution of the Offline Computing Model of the NOvA Experiment*”,
Conference on Computing in High Energy Physics (CHEP2015), J. Phys. Conf. Ser. 664 (2015) 3, 032011
- [8] “*Mu2e Technical Design Report*”,
The Mu2e Project and the Mu2e Collaboration, arXiv:1211.7019 (2014)
- [9] “*Observation of the s-channel and other studies of single top quarks at the Tevatron*”,
XXVIII Rencontres de Physique de la Vallée d’Aoste, Italy, arXiv:1405.0071 (2014)
- [10] “*Software Trigger Algorithms to Search for Magnetic Monopoles with the NOvA Far Detector*”,
Conference on Computing in High Energy Physics, Journal of Physics, Vol. 513, 2014
- [11] “*Charged Leptons*”,
Summary Report of Snowmass Community Summer Study 2013, arXiv:1311.5278 (2013)
- [12] “*Design considerations for the cosmic-ray-veto system of the Mu2e experiment*”,
Proceedings, APS Division of Particles and Fields, Santa Cruz, CA, arXiv:1310.1377 (2013)
- [13] “*Feasibility Study for a Next-Generation Mu2e Experiment*”,
Contribution to the Snowmass Community Summer Study 2013, arXiv:1307.1168 (2013)
- [14] “*The Mu2e Conceptual Design Report*”,
The Mu2e Project and the Mu2e Collaboration, arXiv:1211.7019 (2012)
- [15] “*Updated Combination CDF and D0 Searches for Standard Model Higgs Boson Production with up to 10.0 fb⁻¹ of Data*”,
Tevatron New Phenomena and Higgs Working Group, arXiv:1207.0449 (2012)
- [16] “*Fundamental Physics at the Intensity Frontier*”,
Intensity Frontier Workshop, arXiv:1205.2671 (2012)
- [17] “*Combined CDF and D0 Search for Standard Model Higgs Boson Production with up to 10.0 fb⁻¹ of Data*”,
Tevatron New Phenomena and Higgs Working Group, arXiv:1203.3774 (2012)

- [18] “*Combined CDF and D0 measurement of WZ and ZZ production with b-tagged jets*”, Tevatron New Phenomena and Higgs Working Group, arXiv:1203.3782 (2012)
- [19] “*Combined CDF and D0 Limits on Higgs Boson Production with up to 8.6 fb⁻¹ of Data*”, Tevatron New Phenomena and Higgs Working Group, arXiv:1107.5518 (2011)
- [20] “*Combined CDF and D0 limits on Fermiophobic Higgs Boson Production with up to 8.2 fb⁻¹*”, Tevatron New Phenomena and Higgs Working Group, arXiv:1109.0576 (2011)
- [21] “*Combined CDF and D0 Searches for the Higgs Boson Decaying to Two Photons*”, Tevatron New Phenomena and Higgs Working Group, arXiv:1107.4960 (2011)

Past Conference Proceedings and Non-refereed Publications

- [1] “*Higgs Boson Searches at CDF*”, Contributed to Lake Louise Winter Institute, arXiv:0905.4267 (2009)
- [2] “*Combination of CDF and DØ Single Top Quark Cross Sections Measurements*”, Tevatron New Phenomena and Higgs Working Group, arXiv:0908.2171 (2009)
- [3] “*Combination of Single Top Quark Production Results from CDF*”, Contributed to ICHEP 2008, arXiv:0809.4670 (2008)
- [4] “*Recent QCD Studies at the Tevatron*”, Contributed to XXII Rencontres de Physique de la Vallee d’Aoste, arXiv:0804.4494 (2008)
- [5] “*PDF use from the Tevatron to the LHC*”, Contributed to TeV4LHC workshop, QCD Group Report, hep-ph/0605240 (2005)
- [6] “*Slepton Mass Measurements at the LHC II*”, Contributed to TeV4LHC workshop, Exotics Group Report, hep-ph/0608322 (2005)
- [7] “*Slepton Mass Measurements at the LHC*”, Contributed to Linear Collider Workshop, hep-ph/0507002 (2005)
- [8] “*PYTHIA Tune A, HERWIG, and JIMMY in Run 2 at CDF*”, Contributed to Hera and the LHC workshop, hep-ph/0510198 (2005)
- [9] “*The Les Houches Accord PDFs (LHAPDF) and LHAGLUE*”, Contributed to Hera and the LHC workshop, hep-ph/0508110 (2005)