

Curriculum Vitae

Alex Melnitchouk

Research Scientist, University of Mississippi

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Education	2004 – Ph.D. Physics, <i>Brown University, Providence, RI</i> “Search for non-SM Light Higgs Boson in the $h \rightarrow \gamma\gamma$ Channel”, Advisor: Prof. Greg Landsberg
	1999 – M.Sc. Physics, <i>Brown University, Providence, RI</i>
	1995 – B. Sc. Physics, <i>State University of Chernivtsi, Ukraine</i> Diploma of a Specialist with Honors (Physics, Teacher of Physics) “Energy Structure of Charged and Neutral Vacancies in ZnSe”, Advisor: Prof. Mykola V. Tkach.

Positions Held	01/10 – current – Research Scientist (<i>University of Mississippi, DØ experiment at FNAL</i>)
	06/04–12/09 – Research Associate (<i>University of Mississippi, DØ experiment at FNAL</i>)
	10/03–05/04 – Visiting Research Associate (<i>Brown University, DØ experiment at FNAL</i>)
	07/99–10/03 – Research Assistant (<i>Brown University, DØ experiment at FNAL</i>)
	07/95–08/97 – Junior Research Assistant (<i>State University of Chernivtsi, Chernivtsi, Ukraine</i>)
	09/95–05/97 – Teacher of Physics: <i>part time, (Specialized High School, Chernivtsi, Ukraine)</i>

Research Experience	08/10 – current – co-convener of Electroweak Physics Group of the DØ experiment at the Fermi National Accelerator Laboratory (FNAL), Batavia, IL
	09/09 –08/10 – co-convener of DØ RunIIB W Mass sub-group of DØ Electroweak Physics Group working on 5fb^{-1} dataset analysis
	03/08 –09/09 – member of both RunIA and RunIIB W Mass sub-groups of DØ Electroweak Physics Group, working on 1fb^{-1} and 5fb^{-1} dataset analysis respectively – primary author of DØ 1fb^{-1} W Mass publications
	07/06 –02/08 – searching for the Higgs boson in the $h \rightarrow \gamma\gamma$ channel at DØ – primary author of DØ $h \rightarrow \gamma\gamma$ 1fb^{-1} publication – member of DØ Editorial board on QCD and Photons – main Silicon Microstrip Tracker (SMT) software person at DØ (remain so until now) – improving full detector simulation of SMT data at DØ
	10/04 – 06/06 – responsible for the software part of the Layer Zero Detector RunIIB upgrade at DØ – leader of the “Layer Zero / SMT Software Group” at DØ
	01/01 – 09/04 – member of DØ EMID group (identification of electrons and photons) – co-convener of the EMID working sub-group in the “Higgs and Top” DØ Physics group – several updates of preliminary results on $h \rightarrow \gamma\gamma$ analysis presented at conferences
	10/99 –01/01 – member of DØ Silicon Microstrip Tracker (SMT) detector group – responsible for quality control and installation of the detector components of the SMT

Teaching Experience	09/97 – 05/99 – Teaching Assistant at Brown University
	09/95 –05/97 – Teacher of Physics, Lyceum#1 high school, Chernivtsi, Ukraine
	09/95 –05/97 –occasionally substituting lectures in undergraduate Vector and Tensor Calculus, and Master’s level specialized courses at the Department of Theoretical Physics, National (then State) University of Chernivtsi, Ukraine

Skills		<ul style="list-style-type: none"> – knowledge of Fortran, Visual Basic, Python, and C++ programming languages – experience with Windows, Unix, and Linux operating systems – hardware experience in assembling silicon detector.
Awards	2003 1993	<ul style="list-style-type: none"> – Dissertation Fellowship, <i>Brown University</i>, – Exchange Program Fellowship, <i>University of Saskatchewan, Canada</i>
Talks	03/04/10 02/15/10 02/08/10 01/27/10 11/16/09 08/01/08 10/30/07 10/24/05 09/17/04 08/30/04 04/27/04 04/07/03 04/04/03 05/24/02	<ul style="list-style-type: none"> – “W Mass and Width Measurements at the Tevatron”, <i>The XXIV Rencontres de Physique de la Vallée d'Aoste Conference, La Thuile, Italy</i> – “W Mass and other Electroweak Measurements at the Tevatron”, <i>Indiana University HEP Seminar, Bloomington, IN</i>, – “W Mass and other Electroweak Measurements at the Tevatron”, <i>University of Illinois HEP Seminar, Chicago, IL</i> – “W Boson Mass Measurement at the Tevatron”, <i>University of Arizona HEP Seminar, Tuscon, AZ</i> – “W/Z Properties (including M_W) from Tevatron”, <i>HCP 2009 Conference, Evian, France</i> – “High Mass dijet and $t\bar{t}$ resonance searches at the Tevatron”, <i>ICHEP 2008 Conference, Philadelphia, PA</i> – “Search for the Higgs Boson at the DØ Experiment”, <i>University of Mississippi Colloquium, University, MS</i> – “DØ Search for the Higgs Boson in Multijet Events”, <i>PANIC 2005 Conference, Santa Fe, NM</i> – “Search for $h \rightarrow \gamma\gamma$ at DØ”, <i>Tev4LHC Workshop, Fermilab, IL</i> – “Search for Fermiophobic and Topcolor Higgs in the Diphoton Final States at DØ”, <i>DPF 2004 Conference, Riverside, CA</i> – “Search for non-SM Higgs at DØ”, <i>PHENO 2004 Symposium, Madison, WI</i> – “Search for the Higgs Boson in the $h \rightarrow \gamma\gamma$ Channel”, <i>APS-DPF 2003 Conference, Philadelphia, PA</i> – “Search for new Physics in the $\gamma\gamma$ MET Channel at DØ”, <i>APS-DPF 2003 Conference, Philadelphia, PA</i> – “Search for Light Higgs Boson in the $h \rightarrow \gamma\gamma$ Channel”, <i>DPF 2002 Conference, Williamsburg, VA</i>

DESCRIPTION OF PROFESSIONAL EXPERIENCE

Electroweak Physics Group Convenership

In September 2010 I was appointed a co-convenor of the Electroweak Physics group at DØ. My responsibilities include overseeing the progress of electroweak analyses at DØ, helping students and postdocs with specific analysis aspects, ensuring effective timely communication between the analyzers and editorial boards, reviewing analysis notes and publication drafts before their consideration by the editorial board, organizing and chairing bi-weekly meetings of Electroweak Physics group, participating in weekly and bi-weekly meetings of three sub-groups (W mass, Dibosons, Vgamma).

W Mass and Width Measurement

Between September 2009 and September 2010 I worked as a co-convenor of the DØ W mass group (RunIIB analysis with 4fb^{-1}) until I was appointed a co-convenor of the Electroweak Physics group.

I have also been a principal analyzer for the RunIIA W mass measurement with 1fb^{-1} at DØ.

In 4fb^{-1} measurement I investigated the signal yield losses in the RunIIB data compared to the RunIIA data and found that the losses are uniquely tied to the track matching requirement in the high luminosity environment.

I was responsible for deriving dedicated electron energy scale and energy resolution models for the regions near central calorimeter module boundaries, which have slightly worse performance than the rest of the calorimeter. These models have to be derived in conjunction with the overall energy scale and energy resolution models due to correlations. It was only in the RunIIB analysis that we became sensitive to this difference in the performance near the module edges and dedicated models for these regions became necessary.

In general, due to the increase of data statistics, in RunIIB analysis a number of systematic effects became sufficiently pronounced. Therefore corresponding RunIIA-derived models needed refinements to take into account these effects

I measured electron tracking efficiencies for the W mass analysis.

I modeled QCD and $Z \rightarrow ee$ backgrounds with more precise methods than in the RunIIA analysis.

I improved modeling of non-uniformities in the electron azimuthal distributions due to azimuthally non-uniform instrumental effects.

Another source of challenges of the RunIIB analysis compared to the RunIIA analysis comes from increased integrated luminosity. In addition to causing electron signal yield losses, higher luminosities complicate modeling of hadronic recoil. Hadronic recoil measured in W and Z events in RunIIB includes a large amount of energy from additional interactions which is not correlated with the boson kinematics. Hence it is harder to construct a model which would be equally adequate for low and high recoil energies.

Another aspect that requires additional attention in RunIIB is theoretical uncertainties, which may be counter-intuitive since physics has not changed between RunIIA and RunIIB. However as experimental uncertainties decrease due to higher Z and W statistics, relative importance of the theoretical uncertainties increases. It increases to the extent that the methods of their evaluation adopted in RunIIA are being replaced with more accurate methods.

The overwhelming majority of RunIIB model components are ready. The analysis is rapidly progressing. We aim at significantly improved precision of W mass (by $\sim 30\%$) this winter.

This is a summary of my responsibilities in 4fb^{-1} analysis besides W mass group convenership.

In the RunIIA analysis I was responsible for evaluating the dominant uncertainty due to electron energy scale in the recently published DØ W mass measurement. I studied kinematic properties of the so-called f_Z variable, which is used in determining the electron energy scale along with the reconstructed Z boson mass. To first order, fractional energy scale error translates directly into the error on $M(W)$. Hence, to achieve $\sim 40\text{MeV}$ uncertainty we need to know the energy scale with the precision of 0.05%. With toy-data studies I demonstrated that the “ f_Z method” of deriving the scale is unbiased. I propagated the energy scale error to W mass and W width measurements. I re-evaluated the constant term contribution to EM resolution. For the first time it was found to be consistent with the original design value. I was a primary author of the W mass and W width PRL publications with 1fb^{-1} .

Fermiophobic Higgs Search

I performed a search for the Higgs boson that appears in theories beyond the Standard Model. There are several mechanisms that allow for an enhanced branching fraction of the Higgs decay into photons, which make this channel an excellent probe of new physics. Most of these models have suppressed Higgs couplings to all or some of the fermions. I did several rounds of this analysis with increasing datasets, providing also similar analyses with the measurements of efficiencies, fake rates, and data samples. Preliminary results were presented at 2002, 2003, 2004, and 2007 conferences. 1fb^{-1} result was published in 2008 in PRL

Layer Zero Software Upgrade

During the RunIIB upgrade I was responsible for the Layer Zero upgrade of the totality of the DØ software. Layer Zero is the innermost detector component of the DØ tracking system. Layer Zero was installed at DØ during the Tevatron shutdown in spring and early summer of 2006, which marked a division between the RunIIA and the RunIIB Tevatron runs. As the RunIIB hardware upgrade was progressing, I was asked by the spokespersons to form and lead a group to take care of the software aspect of the upgrade, which, at that point, was in a very unsatisfactory state.

This was an extremely successful project. My group delivered good quality software on a required timescale and ensured smooth data taking with the Layer Zero and the SMT detectors right after the completion of the upgrade. In the course of this project I ensured effective communication between various groups that were involved in the Layer Zero upgrade (hardware, algorithms, simulation, databases, management, RunIIB upgrade integration committee). When the data taking resumed after the shutdown, the Layer Zero/SMT software was ready, including even preliminary alignment with cosmics. At the same time the full Monte Carlo detector simulation of the Layer Zero data was also created on the required timescale.

Before the collider data was taken we verified the expected performance of the Layer Zero with the cosmic muon test at the SiDet facility. We studied the behavior of the sensors in terms of noise, charge sharing between the strips, and cluster position resolution. We adapted the DØ software chain for processing cosmic data at SiDet, thus performing the initial test of the software well before the DØ data were available. Layer Zero detector data improved impact parameter resolution, endowing many DØ physics analysis with improved b-tagging capabilities.

SMT Software

I have been the main expert on the pre-tracking offline SMT software at DØ for last several years. I introduced creation of the SMT data quality container (SmtChipStatusChunk) to DØ reconstruction program. In this container every SVX chip data quality is flagged on event-by-event basis, based on the readout of the last channel in the chip. This information is used in the optimization of tracking performance as well as in the Monte Carlo simulation of the SMT data.

I contributed to studies of event-by-event pedestal subtraction aiming to reduce effects of coherent noise.

I helped implementing SMT updates such as re-mapping of channels and new pedestals in the offline database, usually after a shutdown, including the most recent shutdown.

I introduced modeling SMT inefficiency in the Monte Carlo based on the SVX chip information from the zero bias overlay event. I introduced an improvement of this model based on data-measured SMT efficiencies which was adopted for Monte Carlo production. Currently I am working on further improvements aiming at combining per-event chip information from the overlaid data event with per-detector SMT efficiency information averaged over dedicated data sample.

QCD and Photons Editorial Board

I was a member of the DØ editorial board, which reviews QCD and Photon measurements. Six analyses reviewed and approved by the editorial board were published.

Electron and Photon Identification

I worked on understanding the calorimeter data and improving its quality during the initial period of Tevatron RunII data taking. I performed extensive studies on photon and electron misidentification rates, as well as measurements of EMID and tracking efficiencies. I trained and studied the performance of a multivariable DØ EMID tool (H-Matrix). The results of my studies were used in the $h \rightarrow \gamma\gamma$ analysis, as well as in several other analyses presented at conferences.

As a co-convenor of the EMID subgroup of the “Higgs and Top” DØ physics group I coordinated the studies within the subgroup, organized expert presentations on EMID software, and represented the interests of this subgroup in the DØ EMID group. I initiated studies on electron efficiency in $t\bar{t}$ events in the “Higgs and Top” group. I routinely measured EMID efficiencies and mis-ID rates, which were used by several DØ analyses with photons and electrons in the final state. I worked on development of Neural Networks for photon analyses.

My recent work with electrons, performed in the context of W mass analysis, turned out to have broader consequences in the DØ experiment. It generated substantial interest in the DØ EMID group, particularly, in the areas of matching EM objects to reconstructed tracks at higher luminosities and calibration of the calorimeter data. On the request of DØ EMID conveners I have been sharing the results and experience in these areas with DØ EMID group.

Silicon Tracker Hardware

The Silicon Microstrip Tracker (SMT) is a crucial element of the DØ detector in Run II. It provides precision primary and secondary vertex reconstruction, $b/c/\tau$ -tagging, and significant improvement in transverse momentum resolution both at the trigger and offline levels. Building the SMT was a multi million dollar project, in which the Brown University group got actively engaged in October 1999.

The main challenge of this task was to ensure sub-mil alignment of basic detector elements (ladders) relative to the beam. The most sensitive direction is a tilt of the ladder in the direction perpendicular to the beam; and the tolerance in this tilt is only 15 μm . A necessary requirement for achieving this goal was precise alignment of supporting mechanical components of a ladder relative to the silicon sensors at the stage of ladder production.

I set up and maintained a chain for mechanical quality control of ladders as they were fabricated. This chain involved a team of physicists, as well as technical personnel, and software that I developed for automated evaluation of the mechanical quality of the constructed ladders. At the initial stage of this task, from the data I processed, our group deduced that ladder fabrication fixture needed to be corrected, after which we ensured good production quality through the duration of the SMT project. I was also responsible for the installation of ladders into the mechanical support structure (barrel). This task included operating touch-probe coordinate measurement machine to survey the positioning of installed ladders and electrical testing of ladders. All barrels were completed on time, and the SMT was installed in the DØ detector on schedule, in December 2000.

Condensed Matter Physics Research

I conducted research on bound states in semiconductors at the Department of Theoretical Physics at the State University of Chernivtsi, Ukraine. Studied bound states due to impurities, such as doping atoms and vacancies, in II-VI semiconductor crystals. Crystal impurities produce isolated energy states that appear in the gap between the valence and conduction bands. I performed theoretical analysis of such bound states from the group theory point of view. Energy spectrum of impurities can be uniquely described by the representations of the mathematical group, which corresponds to the point symmetry of the surrounding atoms in the lattice. Studied how macroscopic electrical and optical properties of semiconductor are affected by impurities. I was a primary author of a joint theory-experiment paper on the measurement of the Faraday rotation angle in a semi-magnetic semiconductor.

High School Teaching

I worked as a high school physics teacher at Lyceum#1 in Chernivtsi, Ukraine. This high school was established to teach especially gifted pupils, with an emphasis on Physics and Mathematics. This work was a natural continuation of my earlier involvement with Lyceum#1, where I had my undergraduate teaching internship. The teaching internship was a requirement of my undergraduate education because my major was “Physics. Teacher of Physics”. During this internship I worked under the supervision of Paul Pshenichka, an internationally recognized high school physics teacher. After my graduation Paul Pshenichka invited me to join the team of physics teachers in Lyceum#1 as a part-time teacher. I gladly accepted this invitation and worked there for about a year and a half. I taught classes, conducted problem-solving sessions, and helped students in their preparation for high school conferences.

I remain in touch with Paul Pshenichka and Lyceum#1. For example, during one of my vacation trips home, I gave a lecture in which I told students about Fermilab, Tevatron physics in general and about search for extra dimensions at $D\bar{0}$. This lecture was very well received.

Undergraduate and Graduate Teaching

When I worked as Junior Research Assistant at the State University of Chernivtsi, Ukraine, conducting research in solid state physics, I was asked by my senior colleagues occasionally to substitute for their classes. These classes included undergraduate Vector and Tensor Calculus and graduate Solid State Physics.

Teaching Assistantship

As a teaching assistant at Brown University, I conducted laboratory sections of physics courses for the undergraduate students, both physics and non-physics majors in the course of two academic years. The classes were “Electricity and Magnetism” and “Experiments in Modern Physics”. In addition to the direct laboratory session responsibilities, I usually conducted a brief 10-15 minute lecture to explain further the connection between the experiment they were to perform and the theory learned in class. This effort was very much appreciated by the students. They commented that it really helped them to fill the gap between the class and the experiment in the laboratory, facilitating a better appreciation of both. One particular explanation that I remember as particularly successful was about the Zeeman effect lab experiment. I explained the difference between the theoretical picture, which involves a set of energy levels, and the experimental strategy of measuring transitions between these levels. My pedagogical observation was that the students understood the difference very easily once it was explained. On the other hand, it was difficult for them to realize a need for such a “class thinking”-to-“lab thinking” transition, in the first place. It was absolutely necessary to emphasize that one must often think in quite different terms for understanding the underlying physics of the phenomenon and for observing the very same phenomenon in the lab.

LIST OF PUBLICATIONS

The list of publications is organized as follows:

- Principal author publications
- Publications with significant contributions
- Conference publications
- All DØ publications

Principal author publications

Measurement of the W Boson Mass, V. Abazov et. al. (D0 Collaboration),
Phys. Rev. Lett. 103, 141801 (2009), arXiv.org:0908.0766

Direct Measurement of the W Boson Width,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 103, 231802 (2009), arXiv.org:0909.4814

Search for Decay of a Fermiophobic Higgs Boson $h_f \rightarrow \gamma\gamma$ with the D0 Detector at $\sqrt{s} = 1.96$ TeV,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 101, 051801 (2008), arXiv.org:0803.1514

The D0 Silicon Microstrip Tracker, S. N. Ahmed et. al. arXiv:1005.0801 FERMILAB-PUB-10-101 (2010)

Faraday rotation angle anisotropy in a Fe-based diluted magnetic semiconductor,
S.V. Melnichuk, O.S. Melnichuk, A.I. Savchuk, and D.N. Trifonenko, Semiconductors, Vol 31, Issue 5, 436-438 (1997)

Publications with significant contributions

Measurement of Dijet Angular Distributions at $\sqrt{s} = 1.96$ TeV and Searches for Quark Compositeness and Extra Spatial Dimensions, V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 103, 191803 (2009), arXiv.org:0906.4819

Measurements of Differential Cross Sections of $Z\gamma^* + \text{jets} + X$ Events in pp Collisions at $\sqrt{s} = 1.96$ TeV,
V. Abazov et. al. (D0 Collaboration), Phys. Lett. B 678, 45 (2009), arXiv.org:0903.1748

Measurement of the Isolated Photon Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV, V. Abazov et. al. (D0 Collaboration),
Phys. Lett. B 639, 151 (2006), hep-ex/0511054, Erratum Phys. Lett. B 658, 285 (2008)

Measurement of the Inclusive Jet Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 101, 062001 (2008), arXiv.org:0802.2400

Measurement of the Differential Cross Section for the Production of an Isolated Photon with Associated Jet in pp Collisions at $\sqrt{s} = 1.96$ TeV, V. Abazov et. al. (D0 Collaboration), Phys. Lett. B 666, 435 (2008), arXiv.org:0804.1107

Measurement of Differential $Z/\gamma^* + \text{jet} + X$ Cross Sections in pp Collisions at $\sqrt{s} = 1.96$ TeV,
V. Abazov et. al. (D0 Collaboration), Phys. Lett. B 669, 278 (2008), arXiv.org:0808.1296

Search for Randall-Sundrum Gravitons in Dilepton and Diphoton Final States,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 95, 091801 (2005), hep-ex/0505018

Search for First-Generation Scalar Leptoquarks in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. D 71, 071104 (2005), hep-ex/0412029

Search for Supersymmetry with Gauge-Mediated Breaking in Diphoton Events at $D\bar{O}$,
V. Abazov et. al. (D0 Collaboration), Phys. Rev. Lett. 94, 041801 (2005), hep-ex/0408146

Conference Publications

W mass and width measurements at the Tevatron, Alex Melnitchouk for the CDF and D0 collaborations, arXiv:1011.3853v1,
Prepared for The XXIV Rencontres de Physique de la Vallée d'Aoste Conference, La Thuile, Italy, March 2010.

W and Z properties (including $M(W)$) from Tevatron., CDF and D0 Collaboration (Alex Melnitchouk for the collaboration).
FERMILAB-CONF-09-732-E-PPD, 2009. 6pp., Prepared for 20th Hadron Collider Physics Symposium 2009 (HCP 2009),
Evian, France, 16-20 Nov 2009. Published in PoS HCP2009:011,2009.

High mass dijet and t anti-t resonance searches, CDF Collaboration and D0 Collaboration (Alexander S. Melnitchouk for the
collaboration). FERMILAB-CONF-08-458-E, Oct 2008. 4pp., Presented at 34th International Conference on High Energy
Physics (ICHEP 2008), Philadelphia, Pennsylvania, 30 Jul - 5 Aug 2008, e-Print: arXiv:0810.3338 [hep-ex]

D0 search for the Higgs boson in multijet events, D0 Collaboration (Alex Melnitchouk for the collaboration). FERMILAB-
CONF-05-579-E, Jan 2006. 3pp., Published in AIP Conf.Proc.842:690-692,2006. Also in "Santa Fe 2005, Particles and nuclei"
690-692, e-Print: hep-ex/0601041

Search for non-SM Light Higgs Boson in the $h \rightarrow \gamma\gamma$ Channel at D0 in RunII, Alex Melnitchouk for the D0
collaboration, Contributed to DPF 2004: Annual Meeting of the Division of Particles and Fields (DPF) of the American
Physical Society (APS), Riverside, California, 26-31 Aug 2004; Int.J.Mod.Phys.A20:3305-3307,2005, hep-ex/0501067;
FERMILAB-CONF-04-501-E.

All $D\bar{O}$ publications

$D\bar{O}$ RunII publications (data collected since 2002)

2010

197. Search for Sneutrino Production in $e\mu$ Final States in 5.3 fb⁻¹ of pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 11/5/10: Phys. Rev. Lett. 105, 191802 (2010), arXiv.org:1007.4835 5.3 fb⁻¹
196. Measurement of tt Production in the τ +Jets Topology using pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 10/27/10: Phys. Rev. D 82, 071102 (2010), arXiv.org:1008.4284 1.0 fb⁻¹
195. Search for the Rare Decay $B_s0 \rightarrow \mu^+\mu^-$
Published 9/18/10: Phys. Lett. B 693, 539 (2010), arXiv.org:1006.3469 6.1 fb⁻¹
194. Measurement of the Dijet Invariant Mass Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 9/17/10: Phys. Lett. B 693, 531 (2010), arXiv.org:1002.4594 0.7 fb⁻¹
193. Measurement of the Normalized $Z/\gamma^* \rightarrow \mu^+\mu^-$ Transverse Momentum Distribution
in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 9/16/10: Phys. Lett. B 693, 522 (2010), arXiv.org:1006.0618 1.0 fb⁻¹
192. Dependence of the tt Production Cross Section on the Transverse Momentum of the Top Quark
Published 9/15/10: Phys. Lett. B 693, 515 (2010), arXiv.org:1001.1900 1.0 fb⁻¹
191. Search for Scalar Bottom Quarks and Third-Generation Leptoquarks
in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/19/10: Phys. Lett. B 693, 95 (2010), arXiv.org:1005.2222 5.2 fb⁻¹
190. Search for Flavor Changing Neutral Currents via Quark-Gluon Couplings
in Single Top Quark Production Using 2.3 fb⁻¹ of pp Collisions
Published 8/11/10: Phys. Lett. B 693, 81 (2010), arXiv.org:1006.3575 2.3 fb⁻¹

189. Measurement of the $t\bar{t}$ Cross Section using High-Multiplicity Jet Events
Published 8/20/10: Phys. Rev. D 82, 032002 (2010), arXiv.org:0911.4286 1.0 fb⁻¹
188. Evidence for an Anomalous Like-Sign Dimuon Charge Asymmetry PRL Editors' Suggestion "Physics" Viewpoint article
Published 8/16/10: Phys. Rev. Lett. 105, 081801 (2010), arXiv.org:1007.0395 press coverage, seminars 6.1 fb⁻¹
187. Evidence for an Anomalous Like-Sign Dimuon Charge Asymmetry "Physics" Viewpoint article TOPCITE = 50+
Published 8/16/10: Phys. Rev. D 82, 032001, (2010), arXiv.org:1005.2757 press coverage, seminars 6.1 fb⁻¹
186. Search for CP Violation in $B_s^0 \rightarrow \mu^+ D_s^- X$ Decays in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 7/26/10: Phys. Rev. D 82, 012003 (2010), arXiv.org:0904.3907 5.0 fb⁻¹
185. Combined Tevatron Upper Limit on $g g \rightarrow H \rightarrow W^+ W^-$ and Constraints on the Higgs Boson Mass in Fourth-Generation Fermion Models
Co-authors: DØ and CDF collaborations. Published 7/15/10: Phys. Rev. D 82, 011102 (2010), arXiv.org:1005.3216 5.4 fb⁻¹
184. Search for Randall-Sundrum Gravitons in the Dielectron and Diphoton Final States with 5.4 fb⁻¹ of Data from pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 6/17/10: Phys. Rev. Lett. 104, 241802 (2010), arXiv.org:1004.1826 5.4 fb⁻¹
183. Measurement of Direct Photon Pair Production Cross Sections in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/12/10: Phys. Lett. B 690, 108 (2010), arXiv.org:1002.4917 4.2 fb⁻¹
182. Search for Single Top Quarks in the Tau+Jets Channel using 4.8 fb⁻¹ of pp Collision Data
Published 5/6/10: Phys. Lett. B 690, 5 (2010), arXiv.org:0912.1066 4.8 fb⁻¹
181. Search for the Associated Production of a b Quark and a Neutral Supersymmetric Higgs Boson that Decays into τ Pairs
Published 4/14/10: Phys. Rev. Lett. 104, 151801 (2010), arXiv.org:0912.0968 2.7 fb⁻¹
180. Double Parton Interactions in $\gamma+3$ Jet Events in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 3/31/10: Phys. Rev. D 81, 052012 (2010), arXiv.org:0912.5104 1.0 fb⁻¹
179. b-Jet Identification in the DØ Experiment
Published 3/20/10: Nucl. Instrum. Methods in Phys. Res. Sect. A 620, 490 (2010), arXiv.org:1002.4224
178. Search for the Standard Model Higgs Boson in the $ZH \rightarrow \nu\nu b\bar{b}$ Channel in 5.2 fb⁻¹ of pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 2/18/10: Phys. Rev. Lett. 104, 071801 (2010), arXiv.org:0912.5285 5.2 fb⁻¹
177. Search for Higgs Boson Production in Dilepton and Missing Energy Final States with 5.4 fb⁻¹ of pp Collisions at $\sqrt{s} = 1.96$ TeV PRL Editors' Suggestion "Physics" Viewpoint article, Published 2/12/10: Phys. Rev. Lett. 104, 061804 (2010), arXiv.org:1001.4481 5.4 fb⁻¹
176. Combination of Tevatron Searches for the Standard Model Higgs Boson in the $W^+ W^-$ Decay Mode PRL Editors' Suggestion PRL Cover "Physics" Viewpoint article
Co-authors: DØ and CDF collaborations. Published 2/12/10: Phys. Rev. Lett. 104, 061802 (2010), arXiv.org:1001.4162 4.8 – 5.4 fb⁻¹
175. Search for a Resonance Decaying into WZ Boson Pairs in pp Collisions
Published 2/9/10: Phys. Rev. Lett. 104, 061801 (2010), arXiv.org:0912.0715 4.1 fb⁻¹

2009

174. Determination of the Strong Coupling Constant from the Inclusive Jet Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 12/29/09: Phys. Rev. D 80, 111107 (2009), arXiv.org:0911.2710 0.7 fb⁻¹
173. Direct Measurement of the W Boson Width
Published 12/4/09: Phys. Rev. Lett. 103, 231802 (2009), arXiv.org:0909.4814 1.0 fb⁻¹
172. Measurement of the Top Quark Mass in Final States with Two Leptons
Published 11/20/09: Phys. Rev. D 80, 092006 (2009), arXiv.org:0904.3195 1.0 fb⁻¹
171. Measurement of the t-Channel Single Top Quark Production Cross Section
Published 11/19/09: Phys. Lett. B 682, 363 (2010), arXiv.org:0907.4259 2.3 fb⁻¹
170. Measurement of $Z/\gamma^* + \text{jet} + X$ Angular Distributions in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 11/13/09: Phys. Lett. B 682, 370 (2010), arXiv.org:0907.4286 1.0 fb⁻¹
169. Search for Charged Higgs Bosons in Top Quark Decays
Published 11/12/09: Phys. Lett. B 682, 278 (2009), arXiv.org:0908.1811 1.0 fb⁻¹
168. Measurement of Dijet Angular Distributions at $\sqrt{s} = 1.96$ TeV and Searches for Quark Compositeness and Extra Spatial Dimensions

- Published 11/5/09: Phys. Rev. Lett. 103, 191803 (2009), arXiv.org:0906.4819 0.70 fb⁻¹
167. Measurement of the WW Production Cross Section with Dilepton Final States in pp Collisions at $\sqrt{s} = 1.96$ TeV and Limits on Anomalous Trilinear Gauge Couplings
Published 11/2/09: Phys. Rev. Lett. 103, 191801 (2009), arXiv.org:0904.0673 1.1 fb⁻¹
166. Combination of tt Cross Section Measurements and Constraints on the Mass of the Top Quark and its Decay into Charged Higgs Bosons
Published 10/19/09: Phys. Rev. D 80, 071102 (2009), arXiv.org:0903.5525 1.0 fb⁻¹
165. Search for Pair Production of First-Generation Leptoquarks in pp Collisions at $\sqrt{s}=1.96$ TeV
Published 10/8/09: Phys. Lett. B 681, 224 (2009), arXiv.org:0907.1048 1.0 fb⁻¹
164. Measurement of the W Boson Mass
Published 10/1/09: Phys. Rev. Lett. 103, 141801 (2009), arXiv.org:0908.0766 1.0 fb⁻¹
163. Search for Charged Higgs Bosons in Decays of Top Quarks
Published 9/30/09: Phys. Rev. D 80, 051107 (2009), arXiv.org:0906.5326 0.90 fb⁻¹
162. Measurement of Trilinear Gauge Boson Couplings from WW + WZ \rightarrow lvjj Events in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 9/23/09: Phys. Rev. D 80, 053012 (2009), arXiv.org:0907.4398 1.1 fb⁻¹
161. Direct Measurement of the Mass Difference Between Top and Antitop Quarks
Published 9/21/09: Phys. Rev. Lett. 103, 132001 (2009), arXiv.org:0906.1172 fb⁻¹
160. A Novel Method for Modeling the Recoil in W Boson Events at Hadron Colliders
Published 8/27/09: Nucl. Instrum. Methods in Phys. Res. A 609, 250 (2009), arXiv.org:0907.3713
159. Observation of Single Top-Quark Production
PRL Editors' Suggestion "Physics" Synopsis article published 8/24/09: Phys. Rev. Lett. 103, 092001 (2009), arXiv.org:0903.0850 2.3 fb⁻¹
158. Search for Dark Photons from Supersymmetric Hidden Valleys
Published 8/17/09: Phys. Rev. Lett. 103, 081802 (2009), arXiv.org:0905.1478 4.1 fb⁻¹
157. Search for Associated Production of Charginos and Neutralinos in the Trilepton Final State using 2.3 fb⁻¹ of Data
Published 8/13/09: Phys. Lett. B 680, 34 (2009), arXiv.org:0901.0646 2.3 fb⁻¹
156. Search for Resonant Pair Production of Neutral Long-Lived Particles Decaying to bb in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/13/09: Phys. Rev. Lett. 103, 071801 (2009), arXiv.org:0906.1787 3.6 fb⁻¹
155. Search for Squark Production in Events with Jets, Hadronically Decaying Tau Leptons and Missing Transverse Energy at $\sqrt{s} = 1.96$ TeV
Published 8/7/09: Phys. Lett. B 680, 24 (2009), arXiv.org:0905.4086 1.0 – 2.1 fb⁻¹
154. Search for Next-to-Minimal Supersymmetric Higgs Bosons in the $h \rightarrow aa \rightarrow \mu\mu \mu\mu, \mu\mu \tau\tau$ Channels using pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/3/09: Phys. Rev. Lett. 103, 061801 (2009), arXiv.org:0905.3381 4.2 fb⁻¹
153. Measurement of the tt Production Cross Section and Top Quark Mass Extraction Using Dilepton Events in pp Collisions
152. Search for the Standard Model Higgs Boson in Tau Final States
Published 6/25/09: Phys. Rev. Lett. 102, 251801 (2009), arXiv.org:0903.4800 1.0 fb⁻¹
151. Search for Resonant Diphoton Production with the DØ Detector
Published 6/12/09: Phys. Rev. Lett. 102, 231801 (2009), arXiv.org:0901.1887 2.7 fb⁻¹
150. Relative Rates of B Meson Decays into $\psi(2S)$ and J/ψ
Published 6/10/09: Phys. Rev. D 79, 111102(R) (2009), arXiv.org:0805.2576 1.3 fb⁻¹
149. Measurements of Differential Cross Sections of $Z\gamma^* + \text{jets} + X$ Events in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/29/09: Phys. Lett. B 678, 45 (2009), arXiv.org:0903.1748 1.0 fb⁻¹
148. Measurement of the $Z\gamma \rightarrow \nu\nu\gamma$ Production Cross Section and Limits on Anomalous ZZγ and Zγγ Couplings in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/22/09: Phys. Rev. Lett. 102, 201802 (2009), arXiv.org:0902.2157 2.6 fb⁻¹
147. Search for Charged Higgs Bosons Decaying into Top and Bottom Quarks in pp Collisions
Published 5/14/09: Phys. Rev. Lett. 102, 191802 (2009), arXiv.org:0807.0859 0.90 fb⁻¹
146. Measurement of $\gamma + b + X$ and $\gamma + c + X$ Production Cross Sections in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/12/09: Phys. Rev. Lett. 102, 192002 (2009), arXiv.org:0901.0739 1.0 fb⁻¹
145. Search for Long-Lived Charged Massive Particles with the DØ Detector
Published 4/22/09: Phys. Rev. Lett. 102, 161802 (2009), arXiv.org:0809.4472 1.1 fb⁻¹
144. Evidence of WW+WZ Production with lepton+jets Final States in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 4/21/09: Phys. Rev. Lett. 102, 161801 (2009), arXiv.org:0810.3873 1.1 fb⁻¹
143. Search for the Lightest Scalar Top Quark in Events with Two Leptons in pp Collisions

at $\sqrt{s} = 1.96$ TeV

Published 4/17/09: Phys. Lett. B 675, 289 (2009), arXiv.org:0811.0459 1.0 fb⁻¹

142. Search for Anomalous Top-Quark Couplings with the DØ Detector

Published 3/4/09: Phys. Rev. Lett. 102, 092002 (2009), arXiv.org:0901.0151 1.0 fb⁻¹

Bs0 → Ds(*)Ds(*) and a Measurement of ΔΓsCP/Γs

Published 3/3/09: Phys. Rev. Lett. 102, 091801 (2009), arXiv.org:0811.2173 2.8 fb⁻¹

140. Measurement of the Lifetime of the Bc± Meson in the Semileptonic Decay Channel

Published 3/2/09: Phys. Rev. Lett. 102, 092001 (2009), arXiv.org:0805.2614 1.3 fb⁻¹

139. Search for Admixture of Scalar Top Quarks in the tt Lepton+Jets Final State

at $\sqrt{s} = 1.96$ TeV

Published 2/20/09: Phys. Lett. B 674, 4 (2009) arXiv.org:0901.1063 0.9 fb⁻¹

138. Search for Neutral Higgs Bosons at High tanβ in the b(h/H/A) → bτ+τ- Channel

Published 2/6/09: Phys. Rev. Lett. 102, 051804 (2009) arXiv.org:0811.0024 0.3 fb⁻¹

137. Search for Large Extra Spatial Dimensions in the Dielectron and Diphoton Channels in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 2/6/09: Phys. Rev. Lett. 102, 051601 (2009), arXiv.org:0809.2813 1.0 fb⁻¹

136. Search for Associated W and Higgs Boson Production in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 2/4/09: Phys. Rev. Lett. 102, 051803 (2009), arXiv.org:0808.1970 1.1 fb⁻¹

135. Measurement of the Semileptonic Branching Ratio of Bs0 to an Orbitally Excited

Ds** State: Br(Bs0 → Ds1-(2536)μ+νX)

Published 2/3/09: Phys. Rev. Lett. 102, 051801 (2009), arXiv.org:0712.3789 1.3 fb⁻¹

134. Measurement of the Angular and Lifetime Parameters of the Decays Bd0 → J/ψK*0

and Bs0 → J/ψφ

Published 1/20/09: Phys. Rev. Lett. 102, 032001 (2009), arXiv.org:0810.0037 2.8 fb⁻¹

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133. Search for the Standard Model Higgs Boson in the Missing Energy and

Acoplanar b-Jet Topology at $\sqrt{s} = 1.96$ TeV

Published 12/17/08: Phys. Rev. Lett. 101, 251802 (2008), arXiv.org:0808.1266 0.9 fb⁻¹

132. Search for Pair Production of Second Generation Scalar Leptoquarks

Published 12/11/08: Phys. Lett. B 671, 224 (2009), arXiv.org:0808.4023 1.0 fb⁻¹

131. Search for a Scalar or Vector Particle Decaying into Zγ in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 12/10/08: Phys. Lett. B 671, 349 (2009), arXiv.org:0806.0611 1.0 fb⁻¹

130. Search for Third Generation Scalar Leptoquarks Decaying into τb

Published 12/10/08: Phys. Rev. Lett. 101, 241802 (2008), arXiv.org:0806.3527 1.1 fb⁻¹

129. Measurement of the Bs0 Mixing Parameters from the Flavor-Tagged Decay Bs0 → J/ψφ

Published 12/9/08: Phys. Rev. Lett. 101, 241801 (2008), arXiv.org:0802.2255 2.8 fb⁻¹

TOPCITE = 50+

128. Observation of the Doubly Strange b Baryon Ωb-

Published 12/5/08: Phys. Rev. Lett. 101, 232002 (2008), arXiv.org:0808.4142 1.3 fb⁻¹

127. Search for Neutral Higgs Bosons in Multi-b-Jet Events in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 11/26/08: Phys. Rev. Lett. 101, 221802 (2008), arXiv.org:0805.3556 1.0 fb⁻¹

126. Search for Anomalous Wtb Couplings in Single Top Quark Production

Published 11/25/08: Phys. Rev. Lett. 101, 221801 (2008), arXiv.org:0807.1692 0.9 fb⁻¹

125. Measurement of the Electron Charge Asymmetry in pp → W + X → eν + X Events

at $\sqrt{s} = 1.96$ TeV

Published 11/19/08: Phys. Rev. Lett. 101, 211801 (2008), arXiv.org:0807.3367 0.7 fb⁻¹

124. Measurement of σ(pp → Z + X)Br(Z → τ+τ-) at $\sqrt{s} = 1.96$ TeV

Published 11/8/08: Phys. Lett. B 670, 292 (2008), arXiv.org:0808.1306 1.0 fb⁻¹

123. Measurement of the Forward-Backward Charge Asymmetry and Extraction of sin2θWeff

in pp → Z/γ* + X → e+e- + X Events Produced at $\sqrt{s} = 1.96$ TeV

Published 11/6/08: Phys. Rev. Lett. 101, 191801 (2008), arXiv.org:0804.3220 1.1 fb⁻¹

122. Measurement of the Polarization of the Y(1S) and Y(2S) States in pp Collisions

at $\sqrt{s} = 1.96$ TeV

Published 10/31/08: Phys. Rev. Lett. 101, 182004 (2008), arXiv.org:0804.2799 1.3 fb⁻¹

121. Precise Measurement of the Top-Quark Mass from Lepton+Jets Events

Published 10/29/08: Phys. Rev. Lett. 101, 182001 (2008), arXiv.org:0807.2141 1.0 fb⁻¹

120. Observation of ZZ Production in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 10/23/08: Phys. Rev. Lett. 101, 171803 (2008), arXiv.org:0808.0703 2.7 fb⁻¹

119. Measurement of Differential Z/γ* + jet + X Cross Sections in pp Collisions at $\sqrt{s} = 1.96$ TeV

Published 10/8/08: Phys. Lett. B 669, 278 (2008), arXiv.org:0808.1296 1.0 fb⁻¹

118. $ZZ \rightarrow l+l-\nu\nu$ Production in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 10/6/08: Phys. Rev. D 78, 072002 (2008), arXiv.org:0808.0269 2.7 fb⁻¹
117. Search for Scalar Leptoquarks and T-odd Quarks in the Acoplanar Jet Topology
using 2.5 fb-1 of pp Collision Data at $\sqrt{s} = 1.96$ TeV
Published 9/12/08: Phys. Lett. B 668, 357 (2008), arXiv.org:0808.0446 2.5 fb-1
116. Search for Long-Lived Particles Decaying into Electron or Photon Pairs with the DØ
Detector
Published 9/12/08: Phys. Rev. Lett. 101, 111802 (2008), arXiv.org:0806.2223 1.1 fb-1
115. Search for tt Resonances in the Lepton Plus Jets Final State in pp Collisions
at $\sqrt{s} = 1.96$ TeV
Published 8/22/08: Phys. Lett. B 668, 98 (2008), arXiv.org:0804.3664 0.9 fb-1
114. Search for Higgs Bosons Decaying to Tau Pairs in pp Collisions with the DØ Detector
Published 8/14/08: Phys. Rev. Lett. 101, 071804 (2008), arXiv.org:0805.2491 1.0 fb-1
113. Search for Pair Production of Doubly Charged Higgs Bosons in the $H^{++}H^{--} \rightarrow \mu^+\mu^+\mu^-\mu^-$
Final State
Published 8/13/08: Phys. Rev. Lett. 101, 071803 (2008), arXiv.org:0803.1534 1.1 fb-1
112. Measurement of the Inclusive Jet Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/6/08: Phys. Rev. Lett. 101, 062001 (2008), arXiv.org:0802.2400 0.7 fb-1
111. Measurement of the Differential Cross Section for the Production of an Isolated Photon with
Associated Jet in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/3/08: Phys. Lett. B 666, 435 (2008), arXiv.org:0804.1107 1.0 fb-1
110. Search for Decay of a Fermiophobic Higgs Boson $h_f \rightarrow \gamma\gamma$ with the DØ Detector
at $\sqrt{s} = 1.96$ TeV
Published 7/29/08: Phys. Rev. Lett. 101, 051801 (2008) arXiv.org:0803.1514 1.1 fb-1
109. Evidence for Production of Single Top Quarks
Published 7/14/08: Phys. Rev. D 78, 012005 (2008), arXiv.org:0803.0739 0.9 fb-1
108. Measurement of the Ratio of the $pp \rightarrow W + c$ -jet Cross Section to the Inclusive
 $pp \rightarrow W + \text{jets}$ Cross Section
Published 7/4/08: Phys. Lett. B 666, 23 (2008), arXiv.org:0803.2259 1.0 fb-1
107. Observation of the Bc Meson in the Exclusive Decay $B_c \rightarrow J/\psi\pi$
Published 7/2/08: Phys. Rev. Lett. 101, 012001 (2008), arXiv.org:0802.4258 1.3 fb-1
106. Search for Large Extra Dimensions via Single Photon plus Missing Energy Final States
at $\sqrt{s} = 1.96$ TeV
Published 6/30/08: Phys. Rev. Lett. 101, 011601 (2008), arXiv.org:0803.2137 1.0 fb-1
105. First Study of the Radiation-Amplitude Zero in $W\gamma$ Production and Limits on Anomalous
 $WW\gamma$ Couplings at $\sqrt{s} = 1.96$ TeV
Published 6/20/08: Phys. Rev. Lett. 100, 241805 (2008), arXiv.org:0803.0030 0.7 fb-1
104. Search for Scalar Neutrino Superpartners in $e+\mu$ Final States in pp Collisions
at $\sqrt{s} = 1.96$ TeV
Published 6/19/08: Phys. Rev. Lett. 100, 241803 (2008), arXiv.org:0711.3207 1.0 fb-1
103. Search for W' Boson Resonances Decaying to a Top Quark and a Bottom Quark
Published 5/30/08: Phys. Rev. Lett. 100, 211803 (2008), arXiv.org:0803.3256 0.9 fb-1
102. Study of Direct CP Violation in $B_{\pm} \rightarrow J/\psi K_{\pm}(\pi_{\pm})$ Decays
Published 5/30/08: Phys. Rev. Lett. 100, 211802 (2008), arXiv.org:0802.3299 2.8 fb-1
101. Search for Scalar Top Quarks in the Acoplanar Charm Jets and Missing Transverse Energy
Final State in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/21/08: Phys. Lett. B 665, 1 (2008), arXiv.org:0803.2263 1.0 fb-1
100. Measurement of the tt Production Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/15/08: Phys. Rev. Lett. 100, 192004 (2008), arXiv.org:0803.2779 0.9 fb-1
99. Simultaneous Measurement of the Ratio $B(t \rightarrow Wb)/B(t \rightarrow Wq)$ and the
Top-Quark Pair Production Cross Section with the DØ Detector at $\sqrt{s} = 1.96$ TeV
Published 5/14/08: Phys. Rev. Lett. 100, 192003 (2008), arXiv.org:0801.1326 0.9 fb-1
98. Search for Excited Electrons in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 5/12/08: Phys. Rev. D 77, 091102 (2008), arXiv.org:0801.0877 1.0 fb-1
97. Measurement of the Forward-Backward Charge Asymmetry in Top-Quark Pair Production
Published 4/9/08: Phys. Rev. Lett. 100, 142002 (2008), arXiv.org:0712.0851 0.9 fb-1
96. Search for ZZ and $Z\gamma^*$ Production in pp Collisions at $\sqrt{s} = 1.96$ TeV and Limits on
Anomalous ZZZ and $ZZ\gamma^*$ Couplings
Published 4/2/08: Phys. Rev. Lett. 100, 131801 (2008), arXiv.org:0712.0599 1.0 fb-1
95. A Combined Search for the Standard Model Higgs Boson at $\sqrt{s} = 1.96$ TeV
Published 3/29/08: Phys. Lett. B 663, 26 (2008), arXiv.org:0712.0598 0.4 pb-1

94. Search for Flavor-Changing-Neutral-Current D Meson Decays
Published 3/14/08: Phys. Rev. Lett. 100, 101801 (2008), arXiv.org:0708.2094 1.3 fb-1
93. Measurement of the Shape of the Boson-Transverse Momentum Distribution in
 $pp \rightarrow Z/\gamma^* \rightarrow e^+e^- + X$ Events Produced at $\sqrt{s} = 1.96$ TeV
Published 3/11/08: Phys. Rev. Lett. 100, 102002 (2008), arXiv.org:0712.0803 1.0 fb-1
92. Search for Randall-Sundrum Gravitons with 1 fb-1 of Data from pp Collisions
at $\sqrt{s} = 1.96$ TeV
Published 3/7/08: Phys. Rev. Lett. 100, 091802 (2008), arXiv.org:0710.3338 1.0 fb-1
91. Observation and Properties of the Orbitally Excited B_s2^* Meson
Published 2/28/08: Phys. Rev. Lett. 100, 082002 (2008), arXiv.org:0711.0319 1.3 fb-1
90. Model-Independent Measurement of the W Boson Helicity in Top Quark Decays at $D\emptyset$
Published 2/14/08: Phys. Rev. Lett. 100, 062004 (2008), arXiv.org:0711.0032 1.0 fb-1
89. Search for Squarks and Gluinos in Events with Jets and Missing Transverse Energy
using 2.1 fb-1 of pp Collision Data at $\sqrt{s} = 1.96$ TeV
Published 1/30/08: Phys. Lett. B 660, 449 (2008), arXiv.org:0712.3805 2.1 fb-1
88. Search for W' Bosons Decaying to an Electron and a Neutrino with the $D\emptyset$ Detector
Published 1/24/08: Phys. Rev. Lett. 100, 031804 (2008), arXiv.org:0710.2966 1.0 fb-1
87. Measurement of the Muon Charge Asymmetry from W Boson Decays
Published 1/23/08: Phys. Rev. D 77, 011106 (2008), arXiv.org:0709.4254 0.3 fb-1

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86. Measurement of the $pp \rightarrow WZ + X$ Cross Section at $\sqrt{s} = 1.96$ TeV and Limits on WWZ
Trilinear Gauge Couplings
Published 12/28/07: Phys. Rev. D 76, 111104 (2007), arXiv.org:0709.2917 1000 pb-1
85. Search for Supersymmetry in Di-Photon Final States at $\sqrt{s} = 1.96$ TeV
Published 12/15/07: Phys. Lett. B 659, 856 (2008), arXiv.org:0710.3946 1100 pb-1
84. Study of the Decay $B_s0 \rightarrow D_s(*)D_s(*)$
Published 12/12/07: Phys. Rev. Lett. 99, 241801 (2007), hep-ex/0702049 1300 pb-1
83. Search for the Lightest Scalar Top Quark in Events with Two Leptons in pp Collisions
at $\sqrt{s} = 1.96$ TeV
Published 12/5/07: Phys. Lett. B 659, 500 (2008), arXiv.org:0707.2864 400 pb-1
82. Measurement of the $t\bar{t}$ Production Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Using Kinematic Characteristics of Lepton+Jets Events
Published 11/27/07: Phys. Rev. D 76, 092007 (2007), arXiv.org:0705.2788 425 pb-1
81. Search for Production of Single Top Quarks via t_{cg} and t_{ug} Flavor-Changing-Neutral-
Current Couplings
Published 11/6/07: Phys. Rev. Lett. 99, 191802 (2007), hep-ex/0702005 230 pb-1
80. Search for $B_s0 \rightarrow \mu^+\mu^-$ Decays at $D\emptyset$
Published 11/5/07: Phys. Rev. D 76, 092001 (2007), arXiv.org:0707.3997 1300 pb-1
79. Measurement of the Ratios of the $Z/\gamma^* + \geq n$ jet Production Cross Sections
to the Total Inclusive Z/γ^* Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 11/1/07: Phys. Lett. B 658, 112 (2008), hep-ex/0608052 400 pb-1
78. Measurement of the Λ_{b0} Lifetime Using Semileptonic Decays
Published 10/30/07: Phys. Rev. Lett. 99, 182001 (2007), arXiv.org:0706.2358 1300 pb-1
77. Properties of $L=1$ B_1 and B_2^* Mesons
Published 10/23/07: Phys. Rev. Lett. 99, 172001 (2007), arXiv.org:0705.3229 1300 pb-1
76. Measurement of the $pp \rightarrow t\bar{t}$ Production Cross Section at $\sqrt{s} = 1.96$ TeV
in the Fully Hadronic Decay Channel
Published 10/19/07: Phys. Rev. D 76, 072007 (2007), hep-ex/0612040 405 pb-1
75. Measurement of the Λ_{b0} Lifetime in the Exclusive Decay $\Lambda_{b0} \rightarrow J/\psi \Lambda$
Published 10/1/07: Phys. Rev. Lett. 99, 142001 (2007), arXiv.org:0704.3909 1200 pb-1
74. Measurement of the $t\bar{t}$ Production Cross Section in pp Collisions using Dilepton Events
Published 9/28/07: Phys. Rev. D 76, 052006, (2007), arXiv.org:0706.0458 425 pb-1
73. Search for Stopped Gluinos from pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 9/24/07: Phys. Rev. Lett. 99, 131801 (2007), arXiv.org:0705.0306 410 pb-1
72. Combined $D\emptyset$ Measurements Constraining the CP-Violating Phase and Width Difference
in the B_s0 System
Published 9/17/07: Phys. Rev. D 76, 057101 (2007), hep-ex/0702030 1100 pb-1
71. Search for a Higgs Boson Produced in Association with a Z Boson in pp Collisions
Published 9/6/07: Phys. Lett. B 655, 209 (2007), arXiv.org:0704.2000 450 pb-1

70. Measurement of the Top Quark Mass in the Dilepton Channel
Published 9/6/07: Phys. Lett. B 655, 7 (2007), hep-ex/0609056 370 pb-1
69. $Z\gamma$ Production and Limits on Anomalous $ZZ\gamma$ and $Z\gamma\gamma$ Couplings in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/19/07: Phys. Lett. B 653, 378 (2007), arXiv.org:0705.1550 1100 pb-1
68. Search for Third-Generation Scalar Leptoquarks in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 8/6/07: Phys. Rev. Lett. 99, 061801 (2007), arXiv.org:0705.0812 425 pb-1
67. Direct Observation of the Strange b Baryon Ξ_b^-
TOPCITE=50+ Published 8/3/07: Phys. Rev. Lett. 99, 052001 (2007), arXiv.org:0706.1690
1.3 fb-1PRL Editors' Suggestion
66. Measurement of the Shape of the Boson Rapidity Distribution for $pp \rightarrow Z/\gamma^* \rightarrow e^+e^- + X$ Events Produced at $\sqrt{s} = 1.96$ TeV
Published 7/16/07: Phys. Rev. D 76, 012003 (2007), hep-ex/0702025 400 pb-1
65. Search for Techniparticles in e+jets Events at $D\emptyset$
Published 5/31/07: Phys. Rev. Lett. 98, 221801 (2007), hep-ex/0612013 390 pb-1
64. Multivariate Searches for Single Top Quark Production with the $D\emptyset$ Detector
Published 5/29/07: Phys. Rev. D 75, 092007 (2007), hep-ex/0604020 230 pb-1
63. Measurement of the Top Quark Mass in the Lepton+Jets Channel using the Ideogram Method
Published 5/11/07: Phys. Rev. D 75, 092001 (2007), hep-ex/0702018 425 pb-1
62. Evidence for Production of Single Top Quarks and First Direct Measurement of $|V_{tb}|$ TOPCITE = 100+
Published 5/1/07: Phys. Rev. Lett. 98, 181802 (2007), hep-ex/0612052 900 pb-1
PRL Editors' Suggestion
61. Measurement of the Charge Asymmetry in Semileptonic B_s^0 Decays
Published 4/11/07: Phys. Rev. Lett. 98, 151801 (2007), hep-ex/0701007 1300 pb-1
60. Lifetime Difference and CP-Violating Phase in the B_s^0 System TOPCITE = 50+
Published 3/21/07: Phys. Rev. Lett. 98, 121801 (2007), hep-ex/0701012 1100 pb-1
59. Search for Single Production of Scalar Leptoquarks in pp Collisions Decaying into Muons and Quarks with the $D\emptyset$ Detector
Published 2/15/07: Phys. Lett. B 647, 74 (2007), hep-ex/0612012 300 pb-1
58. Measurement of the W Boson Helicity in Top Quark Decays at $D\emptyset$
Published 2/5/07: Phys. Rev. D 75, 031102(R), (2007), hep-ex/0609045 370 pb-1
57. Experimental Discrimination between Charge $2e/3$ Top Quark and Charge $4e/3$ Exotic Quark Production Scenarios PRL Editors' Suggestion
Published 1/22/07: Phys. Rev. Lett. 98, 041801 (2007), hep-ex/0608044 370 pb-1

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56. Measurement of the tt Production Cross Section in pp Collisions at $\sqrt{s} = 1.96$ TeV using Secondary Vertex b Tagging
Published 12/26/06: Phys. Rev. D 74, 112004 (2006), hep-ex/0611002 425 pb-1
55. Search for the Pair Production of Scalar Top Quarks in the Acoplanar Charm Jet Final State in pp Collisions at $\sqrt{s} = 1.96$ TeV
Published 12/16/06: Phys. Lett. B 645, 119 (2007), hep-ex/0611003 360 pb-1
54. Measurement of B_d Mixing using Opposite-Side Flavor Tagging
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52. Measurement of the Top Quark Mass in the Lepton+Jets Final State with the Matrix Element Method
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51. Measurement of the CP-Violation Parameter of B^0 Mixing and Decay with $pp \rightarrow \mu\mu X$ Data
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Published 10/20/06: Phys. Rev. Lett. 97, 161803 (2006), hep-ex/0607022 260 pb-1
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 and $WW \rightarrow \mu^+\mu^-$ Events from pp Collisions at $\sqrt{s} = 1.96$ TeV
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41. Search for Scalar Leptoquarks in the Acoplanar Jet Topology in pp Collisions at
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WWZ Couplings

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 19. Search for Right-Handed W Bosons in Top Quark Decay
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Published 7/21/05: Phys. Lett. B 622, 265 (2005), hep-ex/0505063 230 pb-1
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Published 3/16/05: Phys. Rev. Lett. 94, 102001 (2005), hep-ex/0410054 250 pb-1
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Published 3/8/05: Phys. Rev. Lett. 94, 091802 (2005), hep-ex/0410062 174 pb-1
 5. Search for the Flavor-Changing Neutral Current Decay $B_s^0 \rightarrow \mu^+\mu^-$ in pp Collisions TOPCITE = 50+ at $\sqrt{s} = 1.96$ TeV with the DØ Detector
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