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Date of Birth: 07-20-1967
Birthplace: Dibrugarh, Assam, India

EDUCATION

Ph.D: 1997, Experimental Particle Physics, University of Delhi, Delhi 110007, India.
Thesis: "E_T and Cone Size Dependence of the Inclusive Jet Cross Section in $p\bar{p}$ Collisions at $\sqrt{s}$ =1.8 TeV."

M.Sc: 1992, Physics, Gauhati University, Guwahati 781014, Assam, India.
First Class.

B.Sc: 1988, Physics, Gauhati University, Guwahati 781014, Assam, India.
First Class.

HONORS

Participant of the 9th NATO Advanced Study Institute on Techniques and Concepts of High Energy Physics, St. Croix, US Virgin Islands, USA, 1996.

Participant of the CTEQ Summer School on QCD Analysis and Phenomenology, Lake Ozark, Missouri, USA, 1994.

Gold Medal, Gauhati University, for obtaining first position among successful candidates in M.Sc. Physics examination, 1992.

Recipient of the National Merit Scholarship, Government of India, from 1989-92.

Recipient of the State Merit Scholarship, Government of Assam, India, from 1983-88.

CONFERENCE PRESENTATIONS/PROCEEDINGS

Participant of Workshop on the Future of Higgs Physics, May 3-5, 2001, Fermi National Accelerator Laboratory, Batavia, IL, USA.

"Level 1 Trigger for the Upgraded DØ detector", October 15-20, 2000, IEEE Nuclear Science Symposium and Medical Imaging Conference, Lyon, France. Joint presentation.

"Triple Differential Dijet Cross Section at the Tevatron", January 1999, International meeting of Divison of Particles and Fields, University of California at Los Angles, USA.

"Inclusive Jet Cross Section and Dijet Angular Distribution at DØ", June 1997, International Conference on Hadron Collider Physics, State University of New York at Stony Brook, USA.

"Inclusive Jet Cross Section as a Function of E_T and Cone Size with the DØ Detector", September 1996, Plenary Talk at the DØ General Collaboration meeting, Fermilab, USA.

"Inclusive Jet Cross Section at DØ", August 1996, International meeting of Divison of Particles and Fields, University of Minnesotta, USA.

"Inclusive Jet Cross Section at DØ", April 1996, International Symposium on Recent Developements in Phenomenology, University of Wisconsin, Madison, USA.

"A Study of the Inclusive Jet Cross Section as a function of Jet Cone Size with the DØ Detector", August 1994, International meeting of Divison of Particles and Fields, University of New Mexico, USA.

Presented many talks in DØ Collaboration meetings and workshops and weekly meetings of the DØ QCD, Jet Energy Scale and Upgrade meetings.

TECHNICAL DESIGN REPORTS (Upgrade of the DØ Detector)

"Technical Design Report: Level 2 Preprocessor for Central and Forward Preshower Triggers", M. Bhattacharjee *et al.*.
http://www-d0.fnal.gov/~mrinmoy/pstrig.html

"Technical Design Report of the Forward Preshower Detector for the DØ Upgrade", A. Gordeev *et al.*, DØ note 3445, May 1998.

"Technical Design Report: Calorimeter Electronics Upgrade for Run 2",
http://www-d0.fnal.gov/~d0upgrad/calelec/intro/tdr/tdrformat.htm,
May, 1998.

INTERNAL NOTES & MEMOS

"Level 1 Trigger OR's with Pseudo AND/OR Terms", D. Edmunds *et al.*, DØ note 3683, September 1999.

"Definition of a single electron/photon Level-2 trigger using the Forward Preshower and the End Calorimeter for the Dzero Upgrade", Mrinmoy Bhattacharjee, DØ note 3614, February 1999.

"Definition of a Level 1 trigger using the Forward PreShower detector for the d0 upgrade", Arnaud Lucotte and Mrinmoy Bhattacharjee, DØ note 3493, August 1998.

"Technical Design Report of the Forward Preshower Detector for the D0 Upgrade", A. Gordeev *et al.*, DØ note 3445, May 1998.

"Single Jet Resolutions at D0 for Run 1", Iain A. Bertram *et al.*, DØ note 3414, March 1998.

"Results from a Beam Test of the Forward Preshower Detector for the D0 Upgrade", Mrinmoy Bhattacharjee *et al.*, DØ note 3398, February 1998.

"Inclusive Jet Cross Section as a Function of Jet Cone Size at D0", Mrinmoy Bhattacharjee *et al.*, DØ note 3128, January 1997.

"Jet Energy Resolutions", Mrinmoy Bhattacharjee *et al.*, DØ note 2887, May 1996.

"Fixed Cone Jet Definitions in D0 and Rsep", B. Abbott *et al.*, DØ note 2885, March 1996.

"Jet Energy Resolution", Mrinmoy Bhattacharjee *et al.*, DØ note 2557, July 1995.

"A Study of the Inclusive Jet Cross-Section as a Function of JetCone Size with the DØ Detector", Mrinmoy Bhattacharjee, DØ note 2261, (DPF '94) (D0CONF-94-39), September 1994.

"Smearing Correction to the Jet Cross Sections", D. Elvira *et al.*, DØ note 2247, August 1994.

"Efficiencies of the Standard Jet Cuts for Cone Sizes: 0.3, 0.5, 0.7", Mrinmoy Bhattacharjee *et al.*, DØ note 2197, July 1994.

DØ Review/Editorial Boards (served/serving as a member)

(1) Triple Differential Jet Cross Section:

Analysis performed on a 93pb^{-1} of data collected during 1993-94 data run of the Fermilab Tevatron collider at a center of mass energy energy of 1.8 TeV. Extending this measurement to forward pseudorapidity regions constrains parton distribution functions and throw new light on the distribution of the fundamental particles, quarks and gluons inside protons and anti-protons and how they interact.

(2) Neural Network Top Dilepton Analysis:

Measurement of the top quark pair production cross section through their decay into electrons and muons in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV has been performed using the Neural Network Technique. An increase in acceptance of the signal by 11% has been observed using this technique compared to conventional methods. These methods should also prove very useful in future collider runs. Study results are to be published in the near future.

(3) Quasi Model independent New Physics Search strategy:

A new quasi model indenpendent way of searching for new physics is being developed and applied to the 108pb^{-1} of data that was accumulated during 1993-95 at Fermilab. The results of this study has not found evidance for new physics in the accumulated data. Being model independent, the method should prove very helpful in future collider runs. Results are published in Phy. Rev. Lett. and Phys. Rev. D.

(4) Quero
This analysis is a bold attempt to move towards making DØ event data available to the general community. Series of data sets for which acceptance and standard model backgrounds, instrumental backgrounds are well understood are made public. A web based utility, Quaero, is provided to permit a physicist with a physics model (which is not included in the standard model) to "query" the data set and obtain information about how the data does or does not support his/her model. Example analyses performed were sometimes competitive to previous analyses. Quero with the example analyses are intended to be published.

RESEARCH EXPERIENCE

I am a member of the DØ collaboration at Fermilab, Batavia, since May 1993. During the period from 1993-1997, my work ranged from the day to day running of the detector, data analysis with special emphasis on QCD and writing software. From 1997 onwards I have been involved in the upgrade of the DØ detector to handle higher luminosity in Run II, reaching peak instantaneous luminosity of $2{\times}10^{32}\mathrm{cm}^{-2}\mathrm{s}^{-1}$. I have contributed extensively towards software and data base development and commissioing, detector fabrication and testing and developement of particle detection techniques. For Run II, I am interested in Electroweak physics. Below is a brief description of my research activity at DØ.

Post-Doctoral Research Associate, 1997 - Present, SUNY, Stony Brook

(1) Design of Hardware (Level 1) electron/EM trigger for Preshower

A first Level Hardware Trigger (L1) is used at the DØ experiment to reduce an input data rate from 7.6MHz to 7KHz within a decision time of 4.2μsec. Various detectors comprising of Preshowers, Central Fiber Tracker, Calorimeter and Muon detectors form this First Level of trigger.

From 1997-2000, I worked on the developement and design of a L1 electron and photon trigger for the Forward (FPS) & Central Preshower (CPS) detectors. Worked on optimizing the trigger algorithm for maximizing Signal over Background. Design of the trigger algorithm for FPS L1 was driven to a large extent by my electron identification algorithm developed during a Beam Test of prototype FPS modules with electron and pion beams in 1997. Results are documented in an internal DØ note 3493.

From 2000-present, I am programming, testing and commissioning L1 trigger algorithms on Xilinx Field Programmable Gate Arrays using VHIC Hardware Definition Language. The procedure includes designing and testing algorithms on an ALDEC simulation of FPGA's, performing timing simulations and optimizing logic for parallel processing within 16nanosecs. Algorithms are downloaded on chips and tested on a Test Bench. It also devising test procedures and test vectors. I have also tested the algorithm using the full L1 FPS system. This effort also includes designing data transfer protocols.

A full description of the DØ hardware level trigger using FPGA's and VHDL for the CFT and Preshower are published in a joint presentation at the IEEE NSS conference at Lyon, France in 2000.

Software electron/EM Level 2 Preshower & Global Trigger for Run II

Since 1998, I am taking the lead role in designing and commissioning of a software based trigger (L2) for the Forward (FPS) and Central Preshower (CPS) detectors. This trigger has a bandwidth of 1kHz and a decision time of 100μsec. Sophisticated algorithms can be used. It is divided into 2 parts, a first level preprocessor accumulates and apply detector specific data and algorithms while a Global processor combines detector specific information to give a final L2 accept.

• I have designed algorithms for triggering on high p_T electrons issued from decay of W & Z particles & for accumulating high statistics photon samples for QCD studies using the Preshower and Calorimeter.

I studied different algorithms for the Preshower and Calorimeter at the Preprocessor level followed by studies of algorithms for combining detector specific information for final L2 decision at a Global processor. Optimized the algorithms for maximum Signal over Background. Studies and results are documented in internal D0 note 3614 and also in http://www-d0.fnal.gov/~mrinmoy/pstrig.html.

• I have programmed the Level 2 electron/photon trigger algorithms for Central and Forward Preshowers in C++ programming language. These triggers will run online on 500 MHz DEC Alpha processors. Performed realistic timing simulations of these triggers on prototype Alpha boards and optimized to process within 50μsec. The same C++ code are made a part of a trigger simulator designed to emulate trigger decisions and functionality.

• I am also responsible for writing tools for the L2 Global processors using C++. These tools combine detector specific information for final L2 decision. These include (1) matching of CFT track, Preshower Cluster and Calorimeter cluster for electron or EM trigger, (2) using CFT track p_T information and Calorimeter clusters energy to calculate invariant mass for dielectron triggers etc.

• I am taking part in the debugging and commissioning of the Preshower L2 trigger Crate. Worked on cabling of all L2 trigger crates and a Test stand.

Design, trigger studies, algorithms, hardware and software of the L2 Preshower (FPS & CPS) trigger have undergone a Technical Design Review and are documented in a Technical Design Report (Reference: DØ note in progress and http://www-d0.fnal.gov/~mrinmoy/pstrig.html).

Run II Trigger Menu & Hardware Level Trigger Rate Studies

In 1998-1999, I have taken part in an effort towards consolidating a full hardware and software Trigger list aimed at covering all of Run II physics and be within the limitations of the hardware & software bandwidth. As part of this effort, I have calculated the background rates for all L1 electromagnetic triggers (QDC γ, $t\bar{t}$, New Phenomena EM, Z background, W mass in central and forward, EM+Track, WZ cross section, Z trigger efficiency etc.) using dijet event samples overlayed with 2-6 extra minbias events. This exercise was aimed at understanding the total L1 trigger rates and also that of individual triggers, throwing light on what triggers can be run without prescale and what triggers need to be prescaled to be within the L1 bandwidth. This helped in understanding the utility of different detectors in triggering. Results can be found at http://www-d0.fnal.gov/∼mrinmoy/pstrig.html.

Beam Test of Forward Preshower Modules

Four modules of the Forward Preshower detector were tested using electron and pion beams during the Summer of 1997. The FPS has 2 layers of nested triangular strips followed by $2X_0$ thick lead sheet followed by another 2 layers of nested triangular strips. Electro Magnetic particles shower upon hitting the lead converter, while charged pions leave only minimum ionizing tracks (MIP).

I wrote the software used to accumulate and store the test beam data in an ntuple format for later analysis. I also took lead role in the analysis of the test beam data.

I developed an algorithm to select electrons hitting the FPS detector. Shower profiles for 50 and 70 GeV electrons beams hitting the FPS were reconstructed for the first time and compared with Monte Calro simulations. Energy dependence of the shower profiles and total shower energy were also studied. These formed a valuable basis for an electron algorithm using the FPS.

Using the high statistics charged pion samples from the test beam run, I characterized the energy deposited by a MIP track and hence the corresponding charge collected by the Visible Light Photon Counter (VLPC) readout. Using the quantum gain of the VLPC's, these numbers were then converted to the number of photoelectrons liberated in the scintillator strips by the passage of a MIP track. This helped us in studying the light yield of the scintillator strips. The studies and results are described in the internal DØ note 3398.

Online Calibration of DØ Calorimeter

I am leading a group from State University of New York at Stony Brook, LPNHE, University of Paris 6 & 7, France and ORSAY, France in building the necessary software to perform electronic calibration of the DØ calorimeter and subsequent analysis of the data. Electronic calibration measures pedestals from electronic and Uranium noise to be subtracted during data taking. Channel to channel response variation, linearity of response with input energy and readout delay are studied by inducing charge into calorimeter from an electronic pulser.

The project, divided into 3 parts corresponds to (1) Control of the Calibration hardware, (2) Accumulating and Online Histogramming of calibration data and (3) Analysis of data and storing in a data base. The software is being written in C++ programming language. The data base is ORACLE.

I have written the data accumulation & histogramming software. These are in the test stage now. I have also developed algorithms for data analysis and have supervised a graduate student from SUNY, Stony Brook in the design of the analysis software and Calorimeter calibration data base. The three different parts of this project, all run in different computers running different operating systems. I am implementing the software for data transfer between these various stages of Calorimeter calibration. The Online calibration of the Calorimeter is an ongoing project and are in various stages of commissioning at present. (Reference: http://www-d0.fnal.gov/∼mrinmoy/calib.html)

I have also taken part in the Technical Design Review of the Calorimeter Electronics Upgrade.

Packing and Unpacking Software for DØ Calorimeter Software

In 2001, I have written data packing and unpacking software for DØ calorimeter readout crates using C++ programing language. These data are readout from Crates containing Timing and Control and Calibration Pulser information for Calorimeter. The unpacking code is used extensively both in realtime and offline enverinment and by many software packages.

Online Monitoring Software for DØ Calorimeter

From 2000 onwards, I have designed and developed an online monitoring software package for the DØ calorimeter readout electronics using C++ programming language. This package is written to analyze and debug (a) Pedestal data, (b) Pulser data, (c) Switch Capacitor Array used to pipeline data for readout until a L1 trigger decision (d) dual digitized data used to cover different dynamical range (e) triple digitized data to study and fix readout timing and (f) data from Inter Cryostat detectors. Programme allows user to dynamically interact and update/change of process variables running modes. Also displays time history of various important variables. This package has been used extensively in commissioning and debugging of DØ Calorimeter and also forms the basis of many other analysis packages.

Graduate Student, 1993-1997, Fermilab/University of Delhi, Delhi, India

QCD Analysis

• I have taken part and have made major contributions towards the measurement of the inclusive jet cross section as a function of jet E_T in $|\eta| \leq 0.5$ for a jet clustering algorithm with a radius of $R = \sqrt{(\Delta\eta^2 + \Delta\phi^2)} = 0.7$. Analysis was performed on 93pb^{-1} data sample taken during the 1994-95 Collider data run. Results are published in Phys. Rev. Letters (Reference: Phys. Rev. Lett. 82, 2451 (1999); FERMILAB PUB-98/207-E; hep-ex/9807018).

• From 1993-1996, I have analyzed data collected by the DØ experiment during the 1992-94 collider run corresponding to an integrated luminosity of 13pb^{-1}. In this study, the inclusive jet cross section has been measured as a function of jet E_T and cone size and compared to NLO QCD theory. The results show that the ratio of cross sections of various cone sizes as function of jet E_T has no dependence on Parton Distribution Functions but dependence on the choice of the Renormalization scale. These results have been presented in various conferences and published in the proceedings (Reference: Division of Particles and Fields in 1996 at University of Minnesotta and 1994 at University of New Mexico, International Symposium on Recent Developments in Phenomenology, 1996, University of Wisconsin, Madison, USA). These results are the basis of my Ph.D. thesis submitted to University of Delhi, Delhi, India.

• Corrections to jet quantities due to effects of noise from hot calorimeter cells, accelerator main ring energy deposits which pass through a part of the calorimeter, particle misidentification have to be removed before any comparisons can be made to theoretical predictions. I have devised methods of removing these noise from data and calculating the efficiencies of these offline cuts as a function of jet E_T, η and cone size so that cross sections can be corrected for the ineffieicncies of these cuts. Results are documented in DØ internal notes 2197 and 3128.

• I was involved in the energy calibration of jets at DØ. Energy calibration is one of the main corrections applied to jets to remove effects of various detector related effects, e.g., Uranium noise, deposits from spectator interactions, imperfect detector response, showering loss of energy outside jet defining cones and finite detector resolution.

Worked on measuring energy loss of jet particles in the detector by showering outside the jet defining cone and hence correcting for this effect. I have also devised methods of measuring jet E_T resolutions as a function of jet E_T, η and cone size – this effect accounts for the 2nd. largest error on the measured jet cross section after error due to jet energy scale correction. These studies have been detailed in DØ notes 3414, 2887 and 2557. Also devised methods of determining jet position resolution. Performed Monte Carlo studies using HERWIG and

JETRAD Monte Carlo programmes as consistency checks of the above studies.

The effect of these finite resolutions is bin to bin migration of jets in E_T and η. Developed methods of unsmearing the jet cross section for these resolution effects. A description of the method and the results of unsmearing are documented in DØ internal note 2247 and 3128.

• Performed systematic studies on the effects various Parton Distribution Functions, Renormalization Scales and Clustering Algorithms on the NLO QCD prediction of the inclusive jet cross section. These results have been published in European Physics Journal and as a Fermilab preprint (Reference: European Physics Journal. C5 (1998) 687-692; FERMILAB PUB-98/017).

• I worked as a part of a NLO jet algorithm group at the DØ experiment and did systematic studies on effects of various jet algorithms on the inclusive jet cross section as function of jet E_T, η and cone size. As a result of this work, we have been able to propose a modified Snowmass algorithm to cluster partons into jets for NLO QCD predictions. I have also generated NLO QCD Monte Carlo samples for theoretical comparisions for the entire DØ experiment.

This work has been documented in internal DØ note 2885 and has also been published as a Fermi National Accelerator Laboratory preprint (Reference: FERMILAB PUB-97/242-E (1997)).

Service Work

• In 1994-95, I took part in streaming of DØ data on Silicon Graphics Processor. The duties involved monitoring the streaming process, book-keeping and taking corrective measures in case of problems.

• In 1993-94, I took detector shifts during collider runs. Responsibilities included efficient data taking and keeping central tracking detectors, calorimeters and the muon detector systems operational. Also performed calibration runs for electronic calibration of different detector components and to monitor error or failure in readout electronics.

Detector Fabrication and Commissioning

In 1993-94, I took part in the fabrication, testing and commissioning of plastic scintillation counters with fiber optic readout used at DØ as cosmic ray muon vetos. My responsibilities included testing the counters for light leakage; efficiency measurement of the counters over wide range of working conditions. Wrote software to analyze cosmic ray data collected by these detectors as part of their testing and commissioining process. The design, operating principles, efficiencies and triggering capabilities of these detectors have been published as an article in Nuclear Instruments and Methods and as a Fermilab preprint (Reference: Nucl. Instrum. Methods Phys. Res. A401, 45 (1997); FERMILAB PUB-97/226-E; hep-ex/9709018).

PUBLICATIONS

"An Investigation of Uncertainties in the QCD NLO Predictions of the Inclusive Jet Cross Section in $\mathrm{p\bar{p}}$ Collisions at $\sqrt{\mathrm{s}}$ =1.8 TeV and 630 GeV", B. Abbott *et al.*, European Physics Journal. C5 (1998) 687-692., FERMILAB PUB-98/017.

"Scintillation Counters for the DØ Muon Upgrade", B.S.Acharya *et al.*, Nucl. Instrum. Methods Phys. Res. A**401**, 45 (1997);Fermilab-Pub-97/226-E; hep-ex/9709018.

"Fixed Cone Jet Definitions in DØ and $\mathrm{R_{sep}}$", B. Abbott *et al.*, FERMILAB PUB-97/242-E (1997).

"The DØ Detector", S. Abachi *et al.*, Nucl. Instrum. Methods Phys. Res. A**338**, 185 (1994); Fermilab-Pub-93/179-E.

"Search for High Mass Top Quark Production in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **74**, 2422 (1995);Fermilab-Pub-94/354-E.

"Observation of the Top Quark", S. Abachi *et al.*, Phys Rev. Lett. **74**, 2632 (1995);Fermilab-Pub-95/028-E.

"Inclusive μ and b-Quark Production Cross Sections in $p\bar{p}$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **74**, 3548 (1995);Fermilab-Pub-94/409-E.

"Search for Squarks and Gluinos in $p\bar{p}$ Collisions at at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 618 (1995); Fermilab-Pub-95/057-E.

"Search for W Boson Pair Production in $p\bar{p}$ Collisions at at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 1023 (1995);Fermilab-Pub-95/044-E.

"Limits on the Anomalous $ZZ\gamma$ and $Z\gamma\gamma$ Couplings in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 1028 (1995);Fermilab-Pub-95/042-E.

"Measurement of the $WW\gamma$ Gauge Boson Coupling in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 1034 (1995);Fermilab-Pub-95/101-E.

"W and Z Boson Production in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 1456 (1995); Fermilab-Pub-95/130-E.

"A Study of the Strong Coupling Constant Using W + Jets Processes", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 3226 (1995); Fermilab-Pub-95/085-E.

"Top Quark Search with the DØ 1992 – 93 Data Sample", S. Abachi *et al.*, Phys. Rev. D**52**, 4877 (1995); Fermilab-Pub-95/020-E.

"Transverse Energy Distributions within Jets in $\overline{p}p$ Collisions at 1.8 TeV", S. Abachi *et al.*, Phys. Lett. B **357**, 500 (1995); Fermilab-Pub-95/203-E.

"Search for Heavy W Bosons in 1.8 TeV $\overline{p}p$ Collisions",S. Abachi *et al.*, Phys. Lett. B **358**, 405 (1995); Fermilab-Pub-95/283-E.

"Second Generation Leptoquark Search in $\overline{p}p$ Collisions at 1.8 TeV", S. Abachi *et al.*, Phys. Rev. Lett. **75**, 3618 (1995); Fermilab-Pub-95/185-E.

"Studies of Topological Distributions of Inclusive Three- and Four-Jet Events in $\overline{p}p$ Collisions at $\sqrt{s}=$ 1800 GeV with the DØ Detector",S. Abachi *et al.*, Phys. Rev. D **53**, 6000 (1996); Fermilab-Pub-95/296-E.

"Jet Production via Strongly-Interacting Color-Singlet Exchange in $\overline{p}p$ Collisons" S. Abachi *et al.*, Phys. Rev. Lett. **76**, 734 (1996);Fermilab-Pub-95/302-E.

"Search for $\widetilde{W}_1\widetilde{Z}_2$ via Trilepton Final States in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **76**, 2228 (1996);Fermilab-Pub-95/385-E.

"Search for Right-Handed W Bosons and Heavy W$'$ in $\overline{p}p$ Collisions at $\sqrt{s}$ = 1.8 TeV",S. Abachi *et al.*, Phys. Rev. Lett. **76**, 3271 (1996); Fermilab-Pub-95/412-E.

"Search for Light Top Squarks in $\overline{p}p$ Collisions at 1.8 TeV", S. Abachi *et al.*, Phys. Rev. Lett. **76**, 2222 (1996);Fermilab-Pub-95/380-E.

"J/Ψ Production in $\overline{p}p$ Collisions at $\sqrt{s}$ = 1.8 TeV", S. Abachi *et al.*,Phys. Lett. B **370**, 239 (1996);Fermilab-Pub-96/003-E.

"The Azimuthal Decorrelation of Jets Widely Separated in Rapidity", S. Abachi *et al.*, Phys. Rev. Lett. **77**, 595 (1996);Fermilab-Pub-96/038-E.

"Search for Anomalous WW and WZ Production in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*,Phys. Rev. Lett. **77**, 3303 (1996); Fermilab-Pub-96/115-E.

"Measurement of the W Boson Mass", S. Abachi *et al.*, Phys. Rev. Lett. **77**, 3309 (1996);Fermilab-Pub-96/177-E.

"Search for Additional Neutral Gauge Bosons", S. Abachi *et al.*, Phys. Lett. B **385**, 471 (1996);Fermilab-Pub-96/187-E.

"The Isolated Photon Cross Section in the Central and Forward Rapidity Region in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **77**, 5011 (1996);Fermilab-Pub-96/072-E.

"Limits on Anomalous $WW\gamma$ Couplings from $\overline{p}\rightarrow W\gamma + X$ Events at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **78**, 3634 (1997); Fermilab-Pub-96/434-E.

"Search for a Fourth Generation Charge -1/3 Quark via Flavor Changing Neutral Current Decay", S. Abachi *et al.*, Phys. Rev. Lett. **78**, 3818 (1997); Fermilab-Pub-96/430-E.

"Search for Diphoton Events with Large Missing Transverse Energy in $\overline{p}p$ Collisions at $\sqrt{s} = 1.8$ TeV", S. Abachi *et al.*, Phys. Rev. Lett. **78**, 2070 (1997);Fermilab-Pub-96/446-E.

"Search for Top Squark Pair Production in the Dielectron Channel", S. Abachi *et al.*, Phys. Rev. D **57**, 589 (1998); Fermilab-Pub-96/449-E.

"Study of the $ZZ\gamma$ and $Z\gamma\gamma$ Couplings in $Z\gamma \rightarrow \nu\nu\gamma$ Production", S. Abachi *et al.*, Phys. Rev. Lett. **78**, 3640 (1997);Fermilab-Pub-97/047-E; hep-ex/9702011.

"Direct Measurement of the Top Quark Mass", S. Abachi *et al.*, Phys. Rev. Lett. **79**, 1197 (1997);Fermilab-Pub-97/059-E; hep-ex/9703008.

"Studies of Gauge Boson Pair Production and Trilinear Couplings", S. Abachi *et al.*, Phys. Rev. D **56**, 6742 (1997); Fermilab-Pub-97/088-E; hep-ex/9704004.

"Measurement of the Top Quark Pair Production Cross Section in $p\bar{p}$ Collisions", S. Abachi *et al.*, Phys. Rev. Lett. **79**, 1203 (1997); Fermilab-Pub-97/109-E; hep-ex/9704015.

"Limits on WWZ and $WW\gamma$ couplings from $\overline{p}p \rightarrow e\nu jjX$ events at $\sqrt{s} = 1.8$ TeV", B. Abbott *et al.*, Phys. Rev. Lett. **79**, 1441 (1997); Fermilab-Pub-97/136-E; hep-ex/9705010.

"Search for Trilepton Signatures from Associated Gaugino Pair Production", B. Abbott *et al.*, Phys. Rev. Lett. **80**, 1591 (1998); Fermilab-Pub-97/153-E; hep-ex/9705015.

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"Measurement of the Top Quark Mass Using Dilepton Events", B. Abbott *et al.*, Phys. Rev. Lett. **80**, 2063 (1998); Fermilab-Pub-97/172-E; hep-ex/9706014.

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