CURRICULUM VITAE

Oscar GONZALEZ LOPEZ

Born in Madrid (Spain), 05-March-1975 Nationality: Spanish
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Academic background

- Start Physics studies in the Universidad Autónoma de Madrid (UAM), October 1993.
- Graduate in Theoretical Physics in the UAM, July 1998.
- Post-Graduate courses (20 credit hours) in the Departamento de Física Teórica, UAM, during the years 1999 and 2000.
- Participation in the 2001 European School of High-Energy Physics, August-September 2001.
- Achievement of the "Diploma de Estudios Avanzados" with the work *Measurement of the subjet multiplicity in neutral current DIS and determination of α_s at HERA.*
  Departamento de Física Teórica, UAM, September 2001.
- **PhD Thesis, June 2001:** *"Precise determinations of the strong coupling constant at HERA*. Qualification: *Sobresaliente Cum Laude*. Honorable mention as DOCTOR EUROPEUS.

  This Thesis has received the Award of the Association of Friends and Sponsors of DESY (*Verein der Freunde und Förderer des DESY*), which yearly awards the most outstanding Ph.D. Thesis based on the DESY research program.

Research Experience

- Join the *High-Energy Physics group of the UAM* in October 1998 to work for the *ZEUS Collaboration* in DESY (Hamburg, Germany).
- Member of the *Physics Working Group HADRONIC FINAL STATES* within the *ZEUS Collaboration*, from October 1998.
- Member of the *CAL-DQM group* of ZEUS, which was in charge of the maintenance of the main calorimeter of the ZEUS detector (UCAL) at the HERA collider. This group was also taking care of the performance of this component during the data taking (from June 1999 to October 2001).
- Analysis of *the internal structure of jets in neutral current DIS (NC DIS)* with the ZEUS 1996-1997 data. The results of this analysis have led to the ZEUS publications *Measurement of subjet multiplicities in neutral current deep inelastic scattering at HERA and determination of α_s* (Preprint DESY 02-217, published as Phys. Lett. **B558** (2004) 41-58).

  The results of this analysis were included in my work to obtain the "Diploma de Estudios Avanzados" (September 2001) and also in my phD thesis (June 2002, published in DESY-THESIS-2002-020).
- Study of the jet production in neutral current DIS in the Breit frame with the ZEUS 1996-1997 data. The results of this analysis have led to the ZEUS publications *Inclusive jet cross sections in the Breit frame in neutral current deep inelastic scattering at HERA and determination of*

α_s (Preprint DESY 02-112; published as Phys. Lett. B **B547** (2002) 164-180) and *Study of the azimuthal asymmetry of jets in neutral current deep inelastic scattering at HERA* (Preprint DESY 02-171, published as Phys. Lett. **B551** (2003) 3-4).

The results of this analysis were included in my phD thesis (June 2002, published in DESY-THESIS-2002-020).

- Coordination of the Monte Carlo samples to be processed by the detector simulation for the *Physics Working Group HADRONIC FINAL STATES* (from May 2000 to October 2001).

- Join the *High-Energy Physics group* of the Purdue University (West Lafayette, Indiana, U.S.A.) in January 2003 as a Post-Doctoral Researcher to work for the *CDF Collaboration* in FNAL (Batavia, Illinois, U.S.A.).

- Analysis for searching the production of the suersymmetric partner of the top quark with the data collected by CDF.

  This analysis was performed as a member of the *SUSY group* of the CDF Collaboration, belonging to the *EXOTICS Working Group*. I have been a member of this groups since January 2003, collaborating in the *SUSY Multlepton Group* whose main task is the development of techniques to identify and study leptons in the final states observed with the CDF detector.

- From January 2003 to October 2005, member of the group in charge of the calibration system of the *PLUG Calorimeter* of the CDF detector. The system uses a *Co-60* source to scan the response of the calorimeter. The group also is responsible for taking the data used for the calibration.

- From April 2003 to July 2005, active member of the *High p_T b-tagging group* of the CDF Collaboration, and started working on improvements of the performance of the b-tagging algorithm used to identify b-quark jets. The algorithm was based on the identification of secondary vertices within the jets.

- During Summer 2003, taking care of the data taking with the CDF detector as an “ACE”. This people are responsible of the data taking and of the monitoring of the detector status on that time.

- Since August 2003, member of the *Higgs group* of CDF, in charge of developing the tools and analyses for searching the Higgs boson.

  In this group, I joined particularly the analysis to identify the Higgs when produced in association with a Z boson.

- Partial collaboration in the analysis searching for the scalar partner of the bottom quark, observed as decaying product of the gluino, which is the fermionic partner of the gluon in the context of supersymmetric models.

  This analysis was remarked as “Result of the Week at Fermilab” by the Fermilab internal newspaper (*FermiNews*, August 11, 2005).

- Since September 2003, partial collaboration in the analysis searching for associated neutralino and chargino production looking for their decay in signatures containing three leptons. In supersymmetric models, especially in “minimal Supergravity”, this is identify as the golden channel for discovering the existence of Supersymmetry due to the clean signature and the high cross section predicted for the production of those particles

- From August 2004 to the end of 2005, I have collaborated with the *Exotics Trigger Group* which is in charge of developing and studying the triggers used in search analysis. During this period, the main purpose of the group was to study the implementation of the different triggers for the high luminosity regime at Tevatron.

My main contribution to the group was to study the implementation of the triggers based on identification of missing E_T.

Since April 2005, I was one of the two conveners of this group.

- From November 2005 to December 2005, I was part of the "Godparent Committee" for checking the analysis searching for the Higgs boson produced in association of a W boson. This checking is a requirement by CDF for any analysis close to final publication.
- From January 2005 to May 2006, I coordinate the *Missing E_T Group* which includes the search analysis based on missing E_T. The group meets weekly to discuss about the different aspect of the analyses involving missing E_T.
- During 3 weeks in Summer 2005 I participated in the commissioning work for the *HCAL* Calorimeter of the CMS detector (under construction), which takes place at CERN. I was involved in the check-out of the modules using a calibration system similar to that used at CDF with radioactive sources (see above) and realization of different jobs relative to the *HCAL* commissioning.
- Since October 2005 I am a member of the High-Energy Physics Group in the CIEMAT (Madrid, Spain) in which I work in the CDF collaboration. The CIEMAT joined CDF at this point and I am one of the representatives of the group in front of the CDF Collaboration. I am a member of the CDF Executive Board and one of the main people in charge of the CIEMAT group at CDF.
- Since October 2005 I am a member of the *Silicon Operations Group* of the CDF Collaboration. This group takes care of all the work related to the data taking with the three silicon detectors at CDF during Run II of the Tevatron, including detector status, maintenance, online DAQ and Monitoring.
- Since January 2006 I am the leader of the *Monitoring Subgroup* belonging to the Silicon Group. The purpose of this subgroup is the monitoring of the data collected with the silicon detector and detect problems in the performance of the different components of the CDF silicon detectors.
- Since May 2006, I am part of the "Godparent Committee" for checking the analysis searching for New Physics in multileptonic final state, concretely for events containing 4-leptons. This internal review is a requirement by CDF for any analysis close to final publication.

Other skills

- Native Spanish speaker.
- English: written and spoken fluently.
  Some knowledge of German, French and Italian.
- Very good knowledge of FORTRAN, C and BASIC. Advanced Knowledge of C++, PERL and shell-scripts (in Linux).
  User-level knowledge of MS-DOS, UNIX (Linux) and MS-WINDOWS. Experience in developing HTML documents and web pages.

TALKS AT CONFERENCES AND WORKSHOPS

1. Talk at the XXXIV International Meeting on Fundamental Physics, El Escorial (Madrid, Spain), April 2006 *Searches in the etmiss+bb channel with the CDF data*.

2. Talk at the EuroGDR Suppersymmetry 2005 International Conference, Barcelona (Spain), November 2005. *New Physics Searches at Tevatron*. On behalf of the CDF and DZERO Collaborations.

3. Talk at the 13^{th} International Conference on Supersymmetry and Unification of Fundamental Interactions (SUSY 2005), Durham (United Kingdom), July 2005. *Search of the Scalar Top and Bottom at CDF in Run II*. On behalf of the CDF Collaboration.

4. Talk at the 14^{th} Topical Conference on Hadron Collider Physics (HCP 2002), Karlsruhe (Germany), September-October 2002. *Jet physics at HERA*. On behalf of the ZEUS and H1 Collaborations.

5. Talk at the 9^{th} International Workshop on Deep Inelastic Scattering (DIS 2001), Bologna (Italy), April 2001. *Determination of α_s from subjet multiplicities*. On behalf of the ZEUS Collaboration.

6. Talk at the Conference of the German Society of Physics (DPG), Bonn (Germany), March 2001. *Inclusive jet cross sections in NC-DIS and determination of α_s.*

7. Talk at the Conference of the German Society of Physics (DPG), Dresden (Germany), March 2000. *Subjet Multiplicity in Neutral Current Deep Inelastic Scattering at HERA.*

Seminars

1. *Monitoring Group Detector Review*. Report given at the II CDF Silicon Workshop (Santa Barbara, USA), May 2006.

2. *New Physics Searches at Tevatron*. Seminar at CIEMAT (Madrid, Spain), November 14^{th}, 2005.

3. *Search of the scalar partner of the top quark in the OS dilepton channel*. CDF Collaboration Meeting, Sitges (Barcelona, Spain), May-June 2005.

4. *Missing E_T, b-jets and Searches with the CDF-II Detector*. Report for the DOE Site Visit to the Purdue University. Purdue University (West Lafayette, Ill. USA), July 2004.

5. *High-p_T Physics at the CDF-II Experiment*. Seminar for the IFT Seminars, Instituto de Física Teórica, UAM (Madrid, Spain), February 2004.

6. *Search for Supersimmetry with the CDF-II Detector*. Report for the DOE Site Visit to the Purdue University. Purdue University (West Lafayette, Ill. USA), August 2003.

7. *Tests of QCD and precise determinations of α_s at HERA*. Summary of my phD Work hen receiving the DESY Ph.D. Award, Zeuthen (Germany), May 2003.

8. *Precise determinations of the strong coupling constant at HERA*. FNAL (Batavia, Ill. USA), September 2002.

9. *Precise determinations of the strong coupling constant at HERA*. Thesis defence, Madrid (Spain), June 2002.

10. *Inclusive jet cross section in NC DIS in the Breit frame and determination of α_s at HERA*. ZEUS Plenary Meeting, DESY (Hamburg, Germany), February 2002.

11. *Extraction of α_s using subjet multiplicities in DIS*. ZEUS Plenary Meeting, DESY (Hamburg, Germany), March 2001.

12. *Estudios de QCD en HERA*. Student Seminar for the Departamento de Física Teórica, UAM (Madrid, Spain), December 2000.

13. *Subjet Multiplicities in DIS and determination of* α_s. ZEUS Plenary Meeting, DESY (Hamburg, Germany), October 2000.

14. *Measurement of the Internal Structure of Jets in NC-DIS*. ZEUS Student Seminar, DESY (Hamburg, Germany), May 2000.

LIST OF PUBLICATIONS

As a member of the CDF Collaboration

1. The CDF Collaboration, A. Abulencia et al. *Search for $Z' \to e^+e^-$ Using Dielectron Mass and Angular Distribution*. *Phys. Rev. Lett.* **96** (2006) 211801.
2. The CDF Collaboration, A. Abulencia et al. *Measurement of the tt-bar Production Cross Section in p anti-p Collisions at s**(1/2) = 1.96 TeV using Missing E(t) + jets Events with Secondary Vertex b-Tagging*. *Phys. Rev. Lett.* **96** (2006) 202002.
3. The CDF Collaboration, A. Abulencia et al. *Search for High-Mass Resonances Decaying to e mu in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 211802.
4. The CDF Collaboration, A. Abulencia et al. *Measurement of the Top Quark Mass with the Dynamical Likelihood Method using Lepton plus Jets Events with b-tags in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D73** (2006) 092002.
5. The CDF Collaboration, A. Abulencia et al. *Measurement of the Inclusive Jet Cross Section using the K_T Algorithm in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 122001.
6. The CDF Collaboration, A. Abulencia et al. *Top Quark Mass Measurement from Dilepton Events at CDF II*. *Phys. Rev. Lett.* **96** (2006) 152002.
7. The CDF Collaboration, A. Abulencia et al. *Measurement of the Dipion Mass Spectrum in X(3872) –¿ j/psi pi+ pi- Decays*. *Phys. Rev. Lett.* **96** (2006) 102002.
8. The CDF Collaboration, A. Abulencia et al. *Search for Second-Generation Scalar Leptoquarks in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D73** (2006) 051102.
9. The CDF Collaboration, A. Abulencia et al. *Measurement of Mass and Width of the Excited Charmed Meson States D0_1 and D*0_2 at CDF* *Phys. Rev.* **D73** (2006) 051104.
10. The CDF Collaboration, A. Abulencia et al. **Search for Higgs Bosons Decaying to bb-bar and Produced in Association with W Bosons in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV**. *Phys. Rev. Lett.* **96** (2006) 081803.
11. The CDF Collaboration, A. Abulencia et al. *Search for Anomalous Semileptonic Decay of Heavy Flavor Hadrons Produced in Association with a W Boson at CDF II*. *Phys. Rev.* **D73** (2006) 051101.
12. The CDF Collaboration, A. Abulencia et al. *Precision Top Quark Mass Measurement in the Lepton + Jets Topology in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 081803.
13. The CDF Collaboration, A. Abulencia et al. **A Search for scalar bottom quarks from gluino decays in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV**. *Phys. Rev. Lett.* **96** (2006) 171802.
14. The CDF Collaboration, A. Abulencia et al. *Search for First-Generation Scalar Leptoquarks in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D72** (2005) 051107.
15. The CDF Collaboration, A. Abulencia et al. *A Search for Supersymmetric Higgs Bosons in the Di-Tau Decay Mode in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D72** (2005) 072004.
16. The CDF Collaboration, A. Abulencia et al. *Search for charged Higgs bosons from top quark decays in p anti-p collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 042003.
17. The CDF Collaboration, A. Abulencia et al. *Top quark mass measurement using the template method in the lepton+jets channel at CDF*. *Phys. Rev.* **D73** (2006) 032003.

18. The CDF Collaboration, A. Abulencia et al. *Direct search for Dirac magnetic monopoles in p anti-p collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 201801.

19. The CDF Collaboration, A. Abulencia et al. *Search for Neutral Higgs Bosons of the Minimal Supersymmetric Standard Model Decaying to tau Pairs in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **96** (2006) 011802.

20. The CDF Collaboration, A. Abulencia et al. *Search for B(S)0 $\to$ MU+ MU- and B(D)0 $\to$ MU+MU- decays in p anti-p collisions with CDF.II*. *Phys. Rev. Lett.* **95** (2005) 221805.

21. The CDF Collaboration, A. Abulencia et al. *Measurement of B hadron masses in exclusive J/psi decays with the CDF detector Phys. Rev. Lett.* **96** (2006) 202001.

22. The CDF Collaboration, A. Abulencia et al. *Measurement of the ratios of branching fractions B(B(S)0 $\to$ D(S)- PI+) / B(B0$\to$ D- PI+) and B(B+ $\to$ ANTI-D0 PI+) / B(B0 $\to$ D- PI+)*. *Phys. Rev. Lett.* **96** (2006) 191801.

23. The CDF Collaboration, A. Abulencia et al. *Search for new high mass particles decaying to lepton pairs in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **95** (2005) 252001.

24. The CDF Collaboration, D. Acosta et al. *Evidence for the exclusive decay $B_c \to J/\psi\pi^{\pm}$ and measurement of the mass of the B_c meson*. *Phys. Rev. Lett.* **96** (2006) 082002.

25. The CDF Collaboration, D. Acosta et al. *Study of jet shapes in inclusive jet production in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D71** (2005) 112002.

26. The CDF Collaboration, D. Acosta et al. *Measurement of the cross section for t anti-t production in p anti-p collisions using the kinematics of lepton+jets events*. *Phys. Rev.* **D72** (2005) 052003.

27. The CDF Collaboration, D. Acosta et al. *Measurement of the W^+W^- Production Cross Section in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV using Dilepton Events*. *Phys. Rev. Lett.* **94** (2005) 211801.

28. The CDF Collaboration, D. Acosta et al. *Search for ZZ and ZW Production in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D71** (2005) 091105.

29. The CDF Collaboration, D. Acosta et al. *Search for Anomalous Kinematics in t anti-t Dilepton Events at CDF II Phys. Rev. Lett.* **95** (2005) 022001.

30. The CDF Collaboration, D. Acosta et al. *Measurement of the Forward-Backward Charge Asymmetry from $W \to e\nu$ Production in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D71** (2005) 051104.

31. The CDF Collaboration, D. Acosta et al. *Measurement of the Moments of the Hadronic Invariant Mass Distribution in Semileptonic B Decays*. *Phys. Rev.* **D71** (2005) 051103.

32. The CDF Collaboration, D. Acosta et al. *Measurement of the Lifetime Difference Between B_s Mass Eigenstates*. *Phys. Rev. Lett.* **94** (2005) 101803.

33. The CDF Collaboration, D. Acosta et al. *First Measurements of Inclusive W and Z Cross Sections from Run II of the Tevatron Collider*. *Phys. Rev. Lett.* **94** (2005) 091803.

34. The CDF Collaboration, D. Acosta et al. *Measurement of the Cross Section for Prompt Diphoton Production in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev. Lett.* **95** (2005) 022003.

35. The CDF Collaboration, D. Acosta et al. *Measurement of the Forward-Backward Charge Asymmetry of Electron-Positron Pairs in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D71** (2005) 052002.

36. The CDF Collaboration, D. Acosta et al. *Search for Scalar Leptoquark Pairs Decaying to $\nu\bar{\nu}q\bar{q}$ in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV*. *Phys. Rev.* **D71** (2005) 119901.

37. The CDF Collaboration, D. Acosta et al. *Measurement of the tt-bar Production Cross Section in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV using Lepton+Jet Events with Secondary Vertex b-tagging. Phys. Rev.* **D71** (2005) 052003.

38. The CDF Collaboration, D. Acosta et al. *Search for Excited and Exotic Electrons in the $e\gamma$ Decay Channel in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev. Lett.* **94** (2005) 101802.

39. The CDF Collaboration, D. Acosta et al. *Measurement of Partial Widths and Search for Direct CP Violation in D0 Meson Decays to K- K+ and pi- pi+. Phys. Rev. Lett.* **94** (2005) 122001.

40. The CDF Collaboration, D. Acosta et al. *Search for $\Lambda_b^0 \to p\pi$ and $\Lambda_b^0 \to pK$ decays in p anti-p collisions at $\sqrt{s} = 1.96$ TeV Phys. Rev.* **D72** (2005) 051104.

41. The CDF Collaboration, D. Acosta et al. *Search for new physics using high mass tau pairs from 1.96 TeV p anti-p collisions Phys. Rev. Lett.* **95** (2005) 131801.

42. The CDF Collaboration, D. Acosta et al. *Measurement of the t anti-t production cross section in p anti-p collisions at $\sqrt{s} = 1.96$ TeV using lepton plus jets events with semileptonic B decays to muons. Phys. Rev.* **D72** (2005) 032002.

43. The CDF Collaboration, D. Acosta et al. *Measurement of B($t \to Wb$)/B($t \to Wq$) at the collider detector at Fermilab. Phys. Rev. Lett.* **95** (2005) 102002.

44. The CDF Collaboration, D. Acosta et al. *Search for long-lived doubly-charged Higgs bosons in p anti-p collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev. Lett.* **95** (2005) 071801.

45. The CDF Collaboration, D. Acosta et al. *First evidence for $B0(s) \to \phi\phi$ decay and measurements of branching ratio and A(CP) for $B^+ \to \phi K^+$. Phys. Rev. Lett.* **95** (2005) 031801.

46. The CDF Collaboration, D. Acosta et al. *Analysis of decay-time dependence of angular distributions in $B0(s) \to J/Psi\phi$ and $B0(d) \to J/PsiK*0$ decays and measurement of the lifetime difference between B(s) mass eigenstates. Phys. Rev. Lett.* **94** (2005) 101803.

47. The CDF Collaboration, D. Acosta et al. *Search for electroweak single top quark production in p anti-p collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev.* **D71** (2005) 0122001.

48. The CDF Collaboration, D. Acosta et al. *Measurement of the J/psi Meson and b-Hadron Production Cross Sections in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev.* **D71** (2005) 032001.

49. The CDF Collaboration, D. Acosta et al. *Search for Anomalous Production of Diphoton Events with Missing Transverse Energy at CDF and Limits on Gauge-Mediated Supersymmetry-Breaking Model. Phys. Rev.* **D71** (2005) 031104.

50. The CDF Collaboration, D. Acosta et al. *Measurement of $W\gamma$ and $Z\gamma$ Production in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev. Lett.* **94** (2005) 041803.

51. The CDF Collaboration, D. Acosta et al. *Measurement of the t anti-t production cross section in p anti-p collisions at $\sqrt{s} = 1.96$ TeV using kinematic fitting of b-tagged lepton+jet events. Phys. Rev.* **D71** (2005) 072005.

52. The CDF Collaboration, D. Acosta et al. *Search for Doubly-Charged Higgs Bosons Decaying to Dileptons in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev. Lett.* **93** (2004) 221802.

53. The CDF Collaboration, D. Acosta et al. *Search for $B0(s) \to \mu^+\mu^-$ and $B0(d) \to \mu^+\mu^-$ Decays in p anti-p Collisions at $\sqrt{s} = 1.96$ TeV. Phys. Rev. Lett.* **93** (2004) 032001.

54. The CDF Collaboration, D. Acosta et al. *Measurement of the tt-bar Production Cross Section in $p\bar{p}$ Collisions at $\sqrt{s} = 1.96$ TeV Using Dilepton Events. Phys. Rev. Lett.* **93** (2004) 142001.

As a member of the ZEUS Collaboration

1. ZEUS Collaboration; S. Chekanov et al. *Forward Jet Production in Deep Inelastic ep Scattering and low-x Parton Dynamics at HERA*. *Phys. Lett.* **B632** (2006) 13-26.
2. ZEUS Collaboration; S. Chekanov et al. *Search for Lepton-Flavor Violation at HERA*. *Eur. Phys. J.* **C44** (2005) 463-479.
3. ZEUS Collaboration; S. Chekanov et al. *Multijet Production in Neutral Current Deep Inelastic Scattering at HERA and Determination of α_s*. *Eur. Phys. J.* **C44** (2005) 183-193.
4. ZEUS Collaboration; S. Chekanov et al. *Study of Deep Inelastic Inclusive and Diffractive Scattering with the ZEUS Forward Plug Calorimeter*. *Nucl. Phys.* **B713** (2005) 3-80.
5. ZEUS Collaboration; S. Chekanov et al. *Search for Pentaquarks Decaying to Xi-pi in Deep Inelastic Scattering at HERA*. *Phys. Lett.* **B610** (2005) 212-224.
6. ZEUS Collaboration; S. Chekanov et al. *Search for a narrow charmed baryonic state decaying to $D^{*\pm}p^{\pm}$ in ep collisions at HERA*. *Eur. Phys. J.* **C38** (2004) 29-41.
7. ZEUS Collaboration; S. Chekanov et al. *Dissociation of virtual photons in events with a leading proton at HERA*. *Eur. Phys. J.* **C38** (2004) 43-67.
8. ZEUS Collaboration; S. Chekanov et al. *Substructure dependence of jet cross sections at HERA and determination of α_s*. *Nucl. Phys.* **B700** (2004) 3-50.
9. ZEUS Collaboration; S. Chekanov et al. *Measurement of beauty production in deep inelastic scattering at HERA*. *Phys. Lett.* **B599** (2004) 173-189.
10. ZEUS Collaboration; S. Chekanov et al. *Evidence for a narrow baryonic state decaying to K0s-(anti)proton in deep inelastic scattering at HERA*. *Phys. Lett.* **B591** (2004) 7-22.
11. ZEUS Collaboration; S. Chekanov et al. *The dependence of dijet production on photon virtuality in ep collisions at HERA*. *Eur. Phys. J.* **C35** (2004) 487-500.
12. ZEUS Collaboration; S. Chekanov et al. *Exclusive electroproduction of J/psi mesons at HERA*. *Nucl. Phys.* **D695** (2004) 3-37.
13. ZEUS Collaboration; S. Chekanov et al. *Study of the pion trajectory in the photoproduction of leading neutrons at HERA*. *Phys. Lett.* **B610** (2005) 199-211.
14. ZEUS Collaboration; S. Chekanov et al. *Observation of isolated high-E_T photons in deep inelastic scattering*. *Phys. Lett.* **B595** (2004) 86-100.
15. ZEUS Collaboration; S. Chekanov et al. *Photoproduction of $D^{*\pm}$ Mesons Associated with a Leading Neutron*. *Phys. Lett.* **B590** (2004) 143-160.
16. ZEUS Collaboration; S. Chekanov et al. *Search for contact interaction, large extra dimensions and finite quark radius in ep collisions at HERA*. *Phys. Lett.* **B591** (2004) 23-41.
17. ZEUS Collaboration; S. Chekanov et al. *High-Q^2 neutral current cross section in e^+p deep inelastic scattering at $\sqrt{s}$=318 GeV*. *Phys. Rev.* **D70** (2004) 052001.
18. ZEUS Collaboration; S. Chekanov et al. *Bottom photoproduction measured using decays into muons in dijet events in ep collisions at $\sqrt{s}$=318 GeV*. *Phys. Rev.* **D70** (2004) 012008.
19. ZEUS Collaboration; S. Chekanov et al. *Search for QCD-instanton induced events in deep inelastic ep scattering at HERA*. *Eur. Phys. J.* **C34** (2004) 255-265.

20. ZEUS Collaboration; S. Chekanov et al. *Isolated tau leptons in events with large missing transverse momentum at HERA*. *Phys. Lett.* **B583** (2004) 41-58.

21. ZEUS Collaboration; S. Chekanov et al. *Bose-Einstein correlations in one and two dimensions in deep inelastic scattering*. *Phys. Lett.* **B583** (2004) 231-246.

22. ZEUS Collaboration; S. Chekanov et al. *Measurement of $D^{*\pm}$ production in deep inelastic e^+p scattering at HERA*. *Phys. Rev.* **D69** (2004) 0120004.

23. ZEUS Collaboration; S. Chekanov et al. *Observation of $K_s^0K_s^0$ resonances in deep inelastic scattering at HERA*. *Phys. Lett.* **B578** (2004) 33-44.

24. ZEUS Collaboration; S. Chekanov et al. *Measurement of the open-charm contribution to the diffractive proton structure function* . *Nucl. Phys.* **B672** (2003) 3-35.

25. ZEUS Collaboration; S. Chekanov et al. *Measurement of high-Q^2 charged current cross sections in e^+p deep inelastic scattering at HERA*. *Eur. Phys. J.* **C32** (2003) 1-16.

26. ZEUS Collaboration; S. Chekanov et al. *Measurement of deeply virtual Compton scattering at HERA*. *Phys. Lett.* **B573** (2003) 46-62.

27. ZEUS Collaboration; S. Chekanov et al. *Jet production in charged current deep inelastic e^+p scattering at HERA*. *Eur. Phys. J.* **C31** (2003) 149-164.

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EPS-2005 Conference (Lisboa, Portugal, July 2005)

- *Search for the associated production of chargino and neutralino in dimuon+ lepton events*. The CDF Collaboration. CDF Public Note 7833 (2005)
- *Search for the Standard Model Higgs boson in the $ZH \to \nu\nu bb$ channel*. The CDF Collaboration. CDF Public Note 7719 (2005)

Post-Graduate Courses

Departamento de Física Teórica, UAM

- *El éter en física: de Maxwell y Einstein a la teoría cuántica* (1998-1999), Prof. J.L. Sánchez-Gómez and Prof. J. M. Sánchez-Ron.
- *Física más allá del modelo estándar* (1998-1999), Prof. L.E. Ibáñez.

- *Theory and phenomenology of the electroweak and strong interactions*. (1998-1999), Prof. E. Gabrielli.
- *Los fundamentos experimentales del modelo estándar de las interacciones fuertes y electrodébiles* (1998-1999), Prof. J. Terrón, Prof. L. Labarga and Prof. J. Fernández de Trocóniz.
- *Supersimetría: Introducción y fenomenología* (1999-2000), Prof. J. A. Casas.

Departamento de Física Aplicada, UAM

- *Tecnología microelectrónica* (1998-1999), Coordinador: Prof. J. Piqueras.

Additional Courses and Schools

- Participation in *the 2001 European School of High-Energy Physics*, Beatenberg (Switzerland), from August 26th - September 8th 2001.
  Organized by the CERN (Geneva, Switzerland), the JINR (Dubna, Russia) and the University of Bern (Switzerland).

AWARDS

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Present Profesional Status

Since October 2005, I am a member of the Group of High Energy Physics in the CIEMAT (Madrid, Spain) in which I work as a Post-Doctoral Researcher of the CDF Collaboration. This Collaboration maintains and analises the data taking with the detector CDF located at the Tevatron accelerator, at FNAL (Batavia, Illinois, U.S.A.).