

## CURRICULUM VITAE

### **1. DATOS GENERALES**

Nombre: **EDUARD DE LA CRUZ BURELO**

Lugar de Nacimiento : **Comalcalco Tabasco, México**

Edad: **30 años**

### **ESCOLARIDAD:**

|              |   |
|--------------|---|
| DOCTORADO    | Doctor en Ciencias, especialidad Física<br>Centro de Investigación y Estudios Avanzados del IPN,<br>Campus México, Departamento de Física,<br>México D.F., México, Marzo 2005.      |
| MAESTRIA     | Maestro en Ciencias, especialidad Física<br>Centro de Investigación y Estudios Avanzados del IPN,<br>Campus México, Departamento de Física,<br>México D.F., México, Diciembre 2002. |
| LICENCIATURA | Licenciado en Física<br>Universidad Juárez Autónoma de Tabasco,<br>Cunduacán Tabasco México, Febrero 2000.  |

### **EXPERIENCIA PROFESIONAL:**

**Marzo 2005 - a la fecha**, Investigador Asociado, Departamento de Física, *The University of Michigan*, Ann Arbor, Michigan, Estados Unidos de América.

**Abril 2005 - a la fecha**, Investigador Visitante, European Organization for Nuclear Research (CERN), Meyrin, Ginebra Suiza.

**Noviembre 2001- Febrero 2005** : Investigador Visitante, Fermi National Accelerator Laboratory (Fermilab), Batavia Illinois, Estados Unidos de América.

Desde 2006 Investigador Nacional Nivel I (SNI I)

### **2. Productos de Investigación o Desarrollo:**

Publicaciones en revistas de prestigio internacional con arbitraje

**2008:**

- 2.1.a.1** “Measurement of the ratios of the  $Z/\gamma^* + \geq n$  jet production cross sections to the total inclusive  $Z/\gamma^*$  cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **658**, 112 (2008), hep-ex/0608052; Fermilab-Pub-06/283-E.
- 2.1.a.2** “Measurement of the muon charge asymmetry from W boson decays”, V. M. Abazov *et al.*, Phys. Rev. D **77**, 011106R (2008). arXiv:0709.4254; Fermilab-Pub-07/493-E.
- 2.1.a.3** “Search for Randall-Sundrum Gravitons with  $1 \text{ fb}^{-1}$  of Data from  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 091802 (2008). arXiv:0710.3338; Fermilab-Pub-07/553-E.
- 2.1.a.4** “Search for  $W'$  bosons decaying to an electron and a neutrino with the DØ detector”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 031804 (2008). arXiv:0710.2966; Fermilab-Pub-07/499-E.
- 2.1.a.5** “Search for Supersymmetry in Di-photon Final States at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **659**, 856 (2008). arXiv:0710.3946; Fermilab-Pub-07/560-E.
- 2.1.a.6** “Model-independent measurement of the W boson helicity in top quark decays at D0”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 062004 (2008). arXiv:0711.0032; Fermilab-Pub-07/588-E.
- 2.1.a.7** “Observation and Properties of the Orbitally Excited  $B_s^{2*}$  Meson”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 082002 (2008). arXiv:0711.0319; Fermilab-Pub-07/585-E.
- 2.1.a.8** “Search for flavor-changing-neutral-current D meson decays”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 101801 (2008). arXiv:0708.2094; Fermilab-Pub-07/423-E.
- 2.1.a.9** “Search for ZZ and  $Z\gamma^*$  production in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV and limits on anomalous ZZZ and  $ZZ\gamma^*$  couplings”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 131801 (2008). arXiv:0712.0599; Fermilab-Pub-07/641-E.
- 2.1.a.10** “Measurement of the shape of the boson transverse momentum distribution in  $p\bar{p} \rightarrow Z/\gamma^* \rightarrow e^+e^- + X$  events produced at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **100**, 102002 (2008). arXiv:0712.0803; Fermilab-Pub-07/642-E.
- 2.1.a.11** “First measurement of the forward-backward charge asymmetry in top quark pair production”, V. M. Abazov *et al.*, Phys. Rev. Lett., 142002 (2008). arXiv:0712.0851; Fermilab-Pub-07/645-E.
- 2.1.a.12** “Search for Squarks and Gluinos in Events with Jets and Missing Transverse Energy using  $2.1 \text{ fb}^{-1}$  of  $p\bar{p}$  Collision Data at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **660**, 449 (2008); arXiv:0712.3805; Fermilab-Pub-07/668-E.

**2007:**

- 2.1.a.13** “Multivariate searches for single top quark production with the DZero detector”, V. M. Abazov *et al.*, Phys. Rev. D **75**, 092007 (2007). hep-ex/0604020; Fermilab-Pub-06/069-E.
- 2.1.a.14** “Experimental discrimination between charge 2e/3 top quark and charge 4e/3 exotic quark production scenarios”, V. M. Abazov *et al.*, Phys. Rev. Lett. **98**, 041801 (2007), hep-ex/0608044; Fermilab-Pub-06/278-E.
- 2.1.a.15** “Measurement of the  $W$  Boson Helicity in Top Quark decay at DØ” V. M. Abazov *et al.*, Phys. Rev. D Rapid. Comm. **75**, 031102(R) (2007); hep-ex/0609045; Fermilab-Pub-06/345-E.
- 2.1.a.16** “Measurement of the top quark mass in the dilepton channel”, V. M. Abazov *et al.*, Phys. Lett. B **655**, 7 (2007); hep-ex/0609056; Fermilab-Pub-06/354-E.
- 2.1.a.17** “Search for the Pair Production of Scalar Top Quarks in the Acoplaner Charm Jet Final State in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **645**, 119 (2007); hep-ex/0611003; Fermilab-Pub-06/396-E.
- 2.1.a.18** “Search for single production of scalar leptoquarks decaying into muons and quarks”, V. M. Abazov *et al.*, Phys. Lett. B **647**, 74 (2007); hep-ex/0612012; Fermilab-Pub-06/455-E.
- 2.1.a.19** “Measurement of the  $p\bar{p} \rightarrow t\bar{t}$  production cross section at  $\sqrt{s} = 1.96$  TeV in the fully hadronic decay channel”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 072007 (2007); Fermilab-PUB-06-426-E; hep-ex/0612040.
- 2.1.a.20** “Search for Techiparticles Decaying into e+jets at DØ”, V. M. Abazov *et al.*, V. M. Abazov *et al.*, Phys. Rev. Lett. **98**, 221801 (2007); hep-ex/0612013; Fermilab-Pub-06/450-E.
- 2.1.a.21** “Evidence for production of single top quarks and first direct measurement of  $|V_{tb}|$ ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **98**, 181802 (2007); hep-ex/0612052; Fermilab-Pub-06/475-E.
- 2.1.a.22** “Measurement of the charge asymmetry in semileptonic  $B_s$  decays” V. M. Abazov *et al.*, Phys. Rev. Lett. **98**, 151801 (2007); hep-ex/0101007; Fermilab-Pub-07/005-E.
- 2.1.a.23** “Lifetime difference and CP-violating phase in the  $B_s^0$  system”, V. M. Abazov *et al.*, Phys. Rev. Lett. **98**, 121801 (2007); hep-ex/0101012; Fermilab-Pub-07/007-E.

- 2.1.a.24** “Search for production of single top quarks via flavor-changing neutral currents at the Tevatron”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 191802 (2007); hep-ex/0702005; Fermilab-Pub-07/031-E.
- 2.1.a.25** “Measurement of the top quark mass in the lepton + jets channel using the Ideogram Method”, V. M. Abazov *et al.*, Phys. Rev. D **75**, 092001 (2007); hep-ex/0702018; Fermilab-Pub-07/039-E.
- 2.1.a.26** “Measurement of the shape of the boson rapidity distribution for  $p\bar{p} \rightarrow Z/\gamma^* \rightarrow eeX$ ”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 012003 (2007); hep-ex/0702025; Fermilab-Pub-07/040-E.
- 2.1.a.27** “Combined D0 Measurements Constraining CP-violating Phase and Width Difference in the  $B_s^0$  System”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 057101 (2007); hep-ex/0702030; Fermilab-Pub-07/044-E.
- 2.1.a.28** “Measurement of the branching fraction  $\text{Br}(B_s \rightarrow D_s^{(*)} D_s^{(*)})$ ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 241801 (2007); hep-ex/0702049; Fermilab-Pub-07/047-E.
- 2.1.a.29** “Search for a Higgs boson produced in association with a  $Z$  boson”, V. M. Abazov *et al.*, Phys. Lett. B **655**, 209 (2007); arXiv:0704.2000; Fermilab-Pub-07/076-E.
- 2.1.a.30** “Measurement of the  $\Lambda_b$  lifetime in the exclusive decay  $\Lambda_b \rightarrow J/\psi \Lambda$ ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 142001 (2007). arXiv:0704.3909; Fermilab-Pub-07/094-E.
- 2.1.a.31** “Search for stopped gluinos from  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 131801 (2007); arXiv:0705.0306; Fermilab-Pub-07/100-E.
- 2.1.a.32** “Search for third generation leptoquarks in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 061801 (2007); arXiv:0705.0812; Fermilab-Pub-07/113-E.
- 2.1.a.33** “ $Z\gamma$  production and limits on anomalous  $ZZ\gamma$  and  $Z\gamma\gamma$  couplings in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **653**, 378 (2007); arXiv:0705.1550; Fermilab-Pub-07/117-E.
- 2.1.a.34** “Measurement of the  $t\bar{t}$  production cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV using kinematic characteristics of lepton + jets events”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 092007 (2007); arXiv:0705.2788; Fermilab-Pub-07/128-E.
- 2.1.a.35** “Observation and properties of L=1  $B_1$  and  $B_2^*$  Mesons”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 172001 (2007); arXiv:0705.3229; Fermilab-Pub-07/130-E.

**2.1.a.36** “Measurement of the  $t\bar{t}$  production cross section in  $p\bar{p}$  collisions using dilepton events”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 052006 (2007); arXiv:0706.0458; Fermilab-Pub-07/143-E.

**2.1.a.37** “Direct observation of the strange  $b$  baryon  $\Xi_b^-$ ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 052001 (2007); arXiv:0706.1690; Fermilab-Pub-07/196-E.

**2.1.a.38** “Measurement of the  $\Lambda_b$  Lifetime in Semileptonic Decays”, V. M. Abazov *et al.*, Phys. Rev. Lett. **99**, 182001 (2007); arXiv:0706.2358; Fermilab-Pub-07/205-E.

**2.1.a.39** “Search for the lightest scalar top quark in events with two leptons in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **659**, 500 (2008); arXiv:0707.2864; Fermilab-Pub-07/352-E.

**2.1.a.40** “Measurement of the  $p\bar{p} \rightarrow WZ + X$  Cross Section at  $\sqrt{s} = 1.96$  TeV and Limits on WWZ Trilinear Gauge Couplings”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 111104R (2007); arXiv:0709.2917; Fermilab-Pub-07/488-E.

**2.1.a.41** “Search for  $B_s^0 \rightarrow \mu^+ \mu^-$  at DØ”, V. M. Abazov *et al.*, Phys. Rev. D **76**, 092001 (2007); arXiv:0707.3997; Fermilab-Pub-07/395-E.

## 2006:

**2.1.a.42** “The Upgraded DØ Detector”, V. M. Abazov *et al.*, Nucl. Instr. and Methods A **565**, 463 (2006), physics/0507191, Fermilab-Pub-05/341-E.

**2.1.a.43** “Search for the Higgs Boson in  $H \rightarrow WW^{(*)}$  Decays in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **96**, 011801 (2006); hep-ex/0508054; Fermilab-Pub-05/377-E.

**2.1.a.44** “Measurement of the isolated photon cross section in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **639**, 151 (2006); hep-ex/0511054, FERMILAB-Pub-05/523-E.

**2.1.a.45** “Search for Pair Production of Second Generation Leptoquarks in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **636**, 183 (2006); hep-ex/0601047, FERMILAB-Pub-06/017-E.

**2.1.a.46** “Direct Limits on  $B_s^0$  Oscillation Frequency”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 021802 (2006); hep-ex/0603029, FERMILAB-Pub-06/055-E.

**2.1.a.47** “Measurement of  $B(t \rightarrow bW)/B(t \rightarrow qW)$  at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **639**, 616 (2006). hep-ex/0603002; Fermilab-Pub-06/037-E.

- 2.1.a.48** “Search for the Rare Decay  $B0_s \rightarrow \phi\mu^+\mu^-$  with the DØ Detector”, V. M. Abazov *et al.*, Phys. Rev. D Rap. Comm. **74**, 031107 (2006); hep-ex/0604015; Fermilab-Pub-06/073-E.
- 2.1.a.49** “Search for Squarks and Gluinos in Events with Jets and Missing Transverse Energy in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **638**, 119 (2006); hep-ex/0604029; Fermilab-Pub-06/077-E.
- 2.1.a.50** “Search for Excited Muons in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. D (Rapid Communications) **73**, 111102 (2006); hep-ex/0604040; Fermilab-Pub-06/081-E.
- 2.1.a.51** “Search for Particles Decaying to a  $Z$  Boson and a Photon in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **641**, 415 (2006); hep-ex 0605064; Fermilab-Pub-06/109-E.
- 2.1.a.52** “Search for R-parity Violating Supersymmetry via the LLE Couplings  $\Lambda_{121}$ ,  $\Lambda_{122}$ , or  $\Lambda_{133}$  in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **638**, 441 (2006); hep-ex/0605005; Fermilab-Pub-06/089-E.
- 2.1.a.53** “Search for Neutral Higgs Bosons Decaying to tau pairs in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 121802 (2006); hep-ex/0605009; Fermilab-Pub-06/092-E.
- 2.1.a.54** “Measurement of the  $B_s0$  Lifetime Using Semileptonic Decays”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 241801 (2006); hep-ex/0604046; Fermilab-Pub-06/085-E.
- 2.1.a.55** “Search for Resonant 2nd Generation Slepton Production at the Tevatron”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 111801 (2006); hep-ex/0605010; Fermilab-Pub-06/094-E.
- 2.1.a.56** “Search for Heavy Resonance Decaying into a  $Z$ +jet Final State in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV using the DØ Detector”, V. M. Abazov *et al.*, Phys. Rev. D Rap. Comm. **74**, 011104 (2006); hep-ex/0606018; Fermilab-Pub-06/167-E.
- 2.1.a.57** “Search for Neutral Long Lived Particles Decaying to Two Muons in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 161802 (2006); hep-ex/0607028; Fermilab-Pub-06/245-E.
- 2.1.a.58** “Search for associated Higgs boson production  $WH \rightarrow WWW^* \rightarrow \ell^\pm\nu\ell^\pm\nu' + X$  in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 151804 (2006); hep-ex/0607032; Fermilab-Pub-06/246-E.
- 2.1.a.59** “Search for the  $W'$  Decay in the top quark channel”, V. M. Abazov *et al.*, Phys. Lett. B **641**, 423 (2006); hep-ex/0607102; Fermilab-Pub-06/257-E.

- 2.1.a.60** “Search for Pair Production of Scalar Bottom Quarks in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 171806 (2006); hep-ex/0608013; Fermilab-Pub-06/269-E.
- 2.1.a.61** “Limits on anomalous trilinear gauge couplings from  $WW \rightarrow ee$ ,  $WW \rightarrow e\mu$ , and  $WW \rightarrow \mu\mu$  events from  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. D Brief Rep. **74**, 057101 (2006); hep-ex/0608011; Fermilab-Pub-06/268-E.
- 2.1.a.62** “Measurement of the top quark mass in the lepton+jets final state with the matrix element method”, V. M. Abazov *et al.*, Phys. Rev. D **74**, 092005 (2006); hep-ex/0609053; Fermilab-Pub-06/353-E.
- 2.1.a.63** “Search for the standard model higgs boson in the  $p\bar{p} \rightarrow ZH \rightarrow \nu\bar{\nu}b\bar{b}$  channel”, V. M. Abazov *et al.*, Phys. Rev. Lett. **97**, 161803 (2006), hep-ex/0607022; Fermilab-Pub-06/238-E.
- 2.1.a.64** “Search for scalar leptoquarks in the acoplaner jet topology”, V. M. Abazov *et al.*, Phys. Lett. B **640**, 230 (2006); hep-ex/0607009, FERMI-Pub-06/233-E.
- 2.1.a.65** “Measurement of the CP-violation parameter of  $B^0$  mixing and decay in the  $p\bar{p} \rightarrow \mu\mu + X$  data”, V. M. Abazov *et al.*, Phys. Rev. D **74**, 092001 (2006); hep-ex/0609014; Fermilab-Pub-06/327-E.
- 2.1.a.66** “Measurement of  $B_d$  Mixing Using Opposite-side Flavor Tagging”, V. M. Abazov *et al.*, Phys. Rev. D **74**, 112002 (2006); hep-ex/0609034; Fermilab-Pub-06/341-E.
- 2.1.a.67** “Measurement of the  $t\bar{t}$  Cross Section in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV using secondary vertex  $b$  tagging Phys. Rev. D **74**, 112004 (2006); hep-ex/0611002; Fermilab-Pub-06/386-E.

### 2005:

- 2.1.a.68** “Search for Supersymmetry with Gauge-Mediated Breaking in Diphoton Events at DØ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **94**, 041801 (2005); hep-ex/0408146; FERMILAB-Pub-04/198-E.
- 2.1.a.69** “Measurement of Dijet Azimuthal Decorrelations at Central Rapidities in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett. **94**, 221801 (2005); hep-ex/0409040; FERMILAB-Pub-04/217-E.
- 2.1.a.70** “Measurement of the  $B_s^0$  Lifetime in the Exclusive Decay Channel  $B_s^0 \rightarrow J/\psi\phi$ ”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 042001 (2005); hep-ex/0409043; FERMILAB-Pub-04-225-E.

- 2.1.a.71** “A Search for the Flavor-Changing Neutral Current Decay  $B_s^0 \rightarrow \mu^+ \mu^-$  in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 071802 (2005); hep-ex/0410039; FERMILAB-Pub-04-215-E.
- 2.1.a.72** “Measurement of the Ratio of  $B^+$  and  $B_0$  Lifetimes”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 182001 (2005); hep-ex/0410052; FERMILAB-Pub-04-284-E.
- 2.1.a.73** “Measurement of the  $\Lambda_b$  Lifetime in the Decay  $\Lambda_b \rightarrow J/\psi \Lambda$  with the DØ Detector”, V. M. Abazov et al, Phys. Rev. Lett. **94** 102001 (2005); hep-ex/0410054; FERMILAB-Pub-04-286-E.
- 2.1.a.74** “A Search for  $W b\bar{b}$  and  $WH$  Production in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. Lett. **94** 091802 (2005); hep-ex/0410062; FERMILAB-Pub-04-288-E.
- 2.1.a.75** “Measurement of the  $WW$  Production Cross Section in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 151801 (2005); hep-ex/0410066; FERMILAB-Pub-04-293-E.
- 2.1.a.76** “A Measurement of the Ratio of Inclusive Cross Sections  $p\bar{p} \rightarrow Zb/p\bar{p} \rightarrow Zj$  at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 161801 (2005); hep-ex/0410078; FERMILAB-Pub-04-297-E.
- 2.1.a.77** “A search for anomalous heavy-flavor quark production in association with W bosons”, V. M. Abazov et al, Phys. Rev. Lett. **94**, 152002 (2005); hep-ex/0411084; FERMILAB-Pub-04-359-E.
- 2.1.a.78** “First measurement of  $\sigma(p\bar{p} \rightarrow Z) \times \text{Br}(Z \rightarrow \tau\tau)$  at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. D **71**, 072004 (2005); hep-ex/0412020; FERMILAB-Pub-04-381-E.
- 2.1.a.79** “Search for first-generation scalar leptoquarks in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al, Phys. Rev. D Rap. Comm. **71**, 071104(R) (2005); hep-ex/0412029; FERMILAB-Pub-04-389-E.
- 2.1.a.80** “Study of  $Z\gamma$  events and limits on anomalous  $ZZ\gamma$  and  $Z\gamma\gamma$  couplings in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al., Phys. Rev. Lett. **95**, 051802 (2005); hep-ex/0502036; FERMI-PUB-05-023-E.
- 2.1.a.81** “Measurement of inclusive differential cross sections for  $\Upsilon(1S)$  production in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov et al., Phys. Rev. Lett. **94**, 232001 (2005); hep-ex/0502030; FERMI-PUB-05-020-E.

- 2.1.a.82** “Measurement of the  $p\bar{p} \rightarrow W\gamma + X$  Cross section and Limits on Anomalous  $WW\gamma$  Couplings at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. D Rap. Comm. **71**, 091108 (2005); hep-ex/0503048; Fermilab-Pub-05/046-E.
- 2.1.a.83** “Production of  $WZ$  Events in  $p\bar{p}$  Collisions at  $\sqrt{s} = 1.96$  TeV and Limits on Anomalous  $WWZ$  Couplings”, V. M. Abazov *et al.*, Phys. Rev. Lett. **95**, 141802, (2005); hep-ex/0504019, Fermilab-Pub-05/061-E.
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- 2.1.a.85** “Measurement of the  $t\bar{t}$  cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV using kinematic characteristics of lepton plus jet events”, V. M. Abazov *et al.*, Phys. Lett. B **626**, 45 (2005); hep-ex/0504043, Fermilab-Pub-05/079-E.
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- 2.1.a.87** “Search for supersymmetry via associated production of charginos and neutralinos using trilepton final states”, V. M. Abazov *et al.*, Phys. Rev. Lett. **95**, 151805 (2005); hep-ex/0504032, Fermilab-Pub-05/075-E.
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- 2.1.a.89** “Search for right-handed W bosons in top quark decay”, V. M. Abazov *et al.*, Phys. Rev. D Rap. Comm **72**, 011104 (R) (2005); hep-ex/0505031, Fermilab-Pub-05/187-E.
- 2.1.a.90** “Search for single top quark production in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Lett. B **622**, 265-276 (2005); hep-ex/0505063, Fermilab-Pub-05/207-E.
- 2.1.a.91** “Measurement of the  $t\bar{t}$  production cross section in  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96$  TeV in dilepton final states”, V. M. Abazov *et al.*, Phys. Lett. B **626**, 55 (2005); hep-ex/0505082, Fermilab-Pub-05/217-E.
- 2.1.a.92** “Search for large extra spatial dimensions in dimuon production at DØ”, V. M. Abazov *et al.*, Phys. Rev. Lett. **95**, 161602 (2005); hep-ex/0506063; Fermilab-Pub-05/250-E.

**2.1.a.93** “Measurement of semileptonic branching fractions of  $B$  mesons to narrow  $D^{**}$  states”, V. M. Abazov *et al.*, Phys. Rev. Lett. **95** 171803 (2005); hep-ex/0507046; Fermilab-Pub-05/313-E.

**2.1.a.94** “Measurement of the lifetime difference in the  $B_s$  system, V. M. Abazov *et al.*, Phys. Rev. Lett. **95**, 171801 (2005); hep-ex/0507084, Fermilab-Pub-05/324-E.

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**2.1.a.95** “Search for Doubly-charged Higgs Boson Production in the Decay  $H^{++}H^{--} \rightarrow \mu^+\mu^+\mu^-\mu^-$  with the DØ Detector at  $\sqrt{s} = 1.96$  TeV”, V. M. Abazov *et al.*, Phys. Rev. Lett **93**, 141801 (2004); hep-ex/040415; FERMILAB-PUB-04/045-E.

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#### Publicaciones en memorias de congresos internacionales, con arbitraje

**2.1.c.1** “ $B$  hadron lifetime measurements at the Tevatron experiments”, E. De La Cruz Burelo, Nucl. Phys. Proc. Suppl. **167**, 201 (2007), *Prepared for 7th International Conference on Hyperons, Charm and Beauty Hadrons (BEACH 2006), Lancaster, England, 2-8 Jul 2006*

**2.1.c.2** “ $\Lambda_b$  polarization study in the ATLAS experiment”, E. De La Cruz Burelo *et al.*, Nucl. Phys. Proc. Suppl. **167**, 225 (2007), *Prepared for 7th International Conference on Hyperons, Charm and Beauty Hadrons (BEACH 2006), Lancaster, England, 2-8 Jul 2006*

**2.1.c.3** “Hyperon polarization in a quark-quark scattering model”, E. De La Cruz Burelo and H. A. Neal, AIP Conf. Proc. **915**, 449 (2007), *Prepared for 17th International Spin Physics Symposium (SPIN06), Kyoto, Japan, 2-7 Oct 2006*

**2.1.c.4** “Planned  $\Lambda_b$  polarization measurements in the LHC ATLAS experiment”, E. De La Cruz Burelo *et al.*, Nucl. Phys. Proc. Suppl. **156**, 151 (2006), *Prepared for 10th International Conference on  $B$  Physics at Hadron Machines (BEAUTY 2005), Assisi, Perugia, Italy, 20-24 Jun 2005*

**2.1.c.5** “ $\Lambda_b$  and heavy states at the Tevatron”, E. de la Cruz Burelo, Nucl. Phys. Proc. Suppl. **156**, 244 (2006), *Prepared for 10th International Conference on  $B$  Physics at Hadron Machines (BEAUTY 2005), Assisi, Perugia, Italy, 20-24 Jun 2005*

**2.1.c.6** “B lifetime measurements from D0”, E. de la Cruz Burelo, Int. J. Mod. Phys. A **20**, 3641 (2005), *Prepared for DPF 2004: Annual Meeting of the Division of Particles and Fields (DPF) of the American Physical Society (APS), Riverside, California, 26-31 Aug 2004*

#### 4. Información correspondiente a los criterios de repercusión académica

##### 4.9 Presentaciones por invitacion en Conferencias:

1. “ **$\Lambda_b$  and heavy states at Tevatron**”, Ponencia invitada en la conferencia BEAUTY 2005, representando a las colaboraciones CDF y DØ del Fermi National Accelerator Laboratory (Batavia Illinois Estados Unidos). Junio 20-24, 2005, Assisi Perugia, Italy.
2. “**Lifetime of B-hadrons**”, Ponencia invitada en la conferencia BEACH 2006, representando a las colaboraciones CDF y DØ del Fermi National Accelerator Laboratory (Batavia Illinois Estados Unidos). Julio 2-8, 2006, Lancaster Inglaterra.
3. “**Properties of Excited and Heavy b-hadrons**”, Ponencia invitada en la conferencia EPS HEPP 2007 (The 2007 Europhysics Conference on High Energy Physics), representando a las colaboraciones CDF y DØ del Fermi National Accelerator Laboratory (Batavia Illinois Estados Unidos). Julio 19-25, 2007, Manchester Inglaterra.
4. “**Recent b spectroscopy results**”, Ponencia invitada en la conferencia DIS 2008 (Deep-Inelastic Scattering and Related Subjects), representando a las colaboraciones CDF y DØ del Fermi National Accelerator Laboratory (Batavia Illinois Estados Unidos). Abril 7-11, 2008, University College London, Londres Inglaterra.
5. “**Early ATLAS results from Heavy Flavour Physics**”, Ponencia plenaria invitada en la conferencia BEACH 2008, representando a la colaboracion ATLAS del Centro Europeo para la Investigacion Nuclear (CERN) (Meyrin Suiza). Junio 22-28, 2008, Coolumbia, Estados Unidos.

#### 5. Criterios Adicionales

##### Otras conferencias y seminarios presentados:

1. “**Inclusive B hadron lifetime at DØ**”, Presentacion en la reunion de la American Physical Society, División de Particles y Campos, Abril 5-8, 2003, Philadelphia Pennsylvania, U.S.A.

2. “**B hadron lifetimes from DØ**”, Presentacion en la reunion de la División de Partículas y Campos de la American Physical Society, Agosto 26-31, 2004, Riverside California, U.S.A.
3. “ **$\Xi_b$  discovery**”, Joined Theoretical and Experimental seminar, Junio 15, 2007. Fermi National Accelerator Laboratory, Batavia, Illinois, Estados Unidos.
4. “**Discovery of a strangely beautiful baryon**”, Seminaire du SPP, Laboratoire de recherche sur les lois fondamentales de l’Univers, Septiembre 10, 2007. Paris Francia.