

СПИСОК
научных работ, опубликованных сотрудниками
Лаборатории физики элементарных частиц
за 2009 год.

1. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Relative rates of B meson decays into $\psi(2S)$ and J/ψ mesons.
Phys. Rev. D79, 111102, 2009.
2. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for charged Higgs bosons in decays of top quarks.
Phys. Rev. D80, 051107, 2009.
3. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of trilinear gauge boson couplings from $WW+WZ \rightarrow l\nu jj$ events in ppcollisions at $s = 1.96$ TeV.
Phys. Rev. D80, 053012, 2009.
4. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Combination of $t\bar{t}$ cross section measurements and constraints on the mass of the top quark and its decays into charged Higgs bosons.
Phys. Rev. D80, 071102, 2009.
5. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the angular and lifetime parameters of the decays and $0^*0/KJBd\psi \rightarrow \Phi \rightarrow \psi/JBs$
Phys. Rev. Lett. 102, 032001, 2009.
6. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for large extra spatial dimensions in the dielectron and diphoton channels in pp collisions at $s = 1.96$ TeV.
Phys. Rev. Lett. 102, 051601, 2009.
7. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the semileptonic branching ratio to an orbitally excited state, $0sB^{**}sD$
(.)2536((10X \rightarrow + $-\mu\nu$ ussDBBr
Phys. Rev. Lett. 102, 051801, 2009.
8. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
A search for associated W and Higgs boson production in pp collisions at $s = 1.96$ TeV.
Phys. Rev. Lett. 102, 051803, 2009.

9. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for neutral Higgs bosons at high $\tan\beta$ in the channel. $++\rightarrow\tau\tau bA H h b$ $||$
Phys. Rev. Lett. 102, 051804, 2009.
10. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Evidence for decay and a measurement of $\sigma(pp\rightarrow\tau\tau bA H h b)$
Phys. Rev. Lett. 102, 091801, 2009.
11. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the lifetime of the meson in the semileptonic decay channel. $\pm cB$
Phys. Rev. Lett. 102, 092001, 2009.
12. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for anomalous top quark couplings with the D0 detector.
Phys. Rev. Lett. 102, 092002, 2009.
13. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Evidence of $WW + WZ$ production with lepton + jets final states in pp collisions
 $s = 1.96$ TeV.
Phys. Rev. Lett. 102, 161801, 2009.
14. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for long-lived charged massive particles with the D0 detector.
Phys. Rev. Lett. 102, 161802, 2009.
15. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for charged Higgs bosons decaying to top and bottom quarks in pp collisions.
Phys. Rev. Lett. 102, 191802, 2009.
16. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of $Xb^{++}\gamma$ and $Xc^{++}\gamma$ production cross sections in pp collisions at
 $s = 1.96$ TeV.
Phys. Rev. Lett. 102, 192002, 2009.
17. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the $\gamma\nu\nu\gamma\rightarrow Z$ cross section and limits on anomalous γZZ and $\gamma\gamma Z$
couplings in pp collisions at $s = 1.96$ TeV.
Phys. Rev. Lett. 102, 201802, 2009.
18. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for resonant diphoton production with the D0 detector.
Phys. Rev. Lett. 102, 231801, 2009.

19. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for the standard model Higgs boson in tau final states.
Phys. Rev. Lett. 102, 251801, 2009.
20. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for NMSSM Higgs bosons in the $\mu\mu\tau\mu\mu\mu, \rightarrow\rightarrow aah$ channels using pp collisions at $s=1.96$ TeV.
Phys. Rev. Lett. 103, 061801, 2009.
21. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for resonant pair production of long-lived particles decaying to bb in pp collisions at $s=1.96$ TeV.
Phys. Rev. Lett. 103, 071801, 2009.
22. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for dark photons from supersymmetric hidden valleys.
Phys. Rev. Lett. 103, 081802, 2009.
23. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Observation of single top quark production.
Phys. Rev. Lett. 103, 092001, 2009.
24. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Direct measurement of the mass difference between top and antitop quarks.
Phys. Rev. Lett. 103, 132001, 2009.
25. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the W boson mass.
Phys. Rev. Lett. 103, 141801, 2009.
26. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the WW production cross section with dilepton final states in pp collisions at $s=1.96$ TeV and limits on anomalous trilinear gauge couplings.
Phys. Rev. Lett. 103, 191801, 2009.
27. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of dijet angular distributions at $s=1.96$ TeV and searches for quark compositeness and extra spatial dimensions.
Phys. Rev. Lett. 103, 191803, 2009.

28. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of $\sigma(\tau\tau)$ at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B670, 292-299, 2009.
29. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for pair production of second generation scalar leptoquarks.
Phys. Lett. B671. 224-232, 2009.
30. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for a scalar or vector particle decaying into γZ in pp collisions at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B671. 349-355, 2009.
31. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for admixture of scalar top quarks in the $t\bar{t}$ lepton + jets final state at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B674, 4-10, 2009.
32. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for the lightest scalar top quark in events with two leptons in pp collisions at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B675, 289, 2009.
33. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurements of differential cross sections of events in X jets Z^{++*}/γ pp collisions at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B678, 45-54, 2009.
34. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the $t\bar{t}$ production cross section and top quark mass extraction using dilepton events in pp collisions.
Phys. Lett. B679, 177-185, 2009.
35. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for squark production in events with jets, hadronically decaying tau leptons and missing transverse energy at $\sqrt{s} = 1.96$ TeV.
Phys. Lett. B680, 24-33, 2009.
36. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for associated production of charginos and neutralinos in the tripleton final state using 2.3 fb^{-1} of data.
Phys. Lett. B680, 34-43, 2009.

37. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for pair production of first-generation leptoquarks in pp collisions at $s = 1.96$ TeV.
Phys. Lett. B681, 224-232, 2009.
38. E. Abat, ..., O.L. Fedin, A. Kazarov, A. Khristachev, S. Kovalenko, L.G. Kudin, V.P. Maleev, A.V. Nadtochi, S.Y. Nesterov, S.B. Oleshko, S. Patrichev, Y.F. Ryabov, V.A. Schegelsky, D.M. Seliverstov, I. Soloviev et al.
Study of the response of the ATLAS central calorimeter to pions of energies from 3 to 9 GeV.
Nucl. Instrum. Meth. A607, 372-386, 2009.
39. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
A novel method for modeling the recoil in W boson events at hadron collider.
Nucl. Instrum. Meth. A609, 250-262, 2009.
40. V.I. Medvedev, A.A. Vasiliev, K.N. Ermakov, V.P. Koptev, L.M. Kochenda, V.I. Poromov, O.V. Rogachevsky, V.V. Sarantsev, V.A. Trofimov, S.G. Sherman.
Measurement of the spectrum of neutrons produced in pd collisions at an angle of $\theta = 0$ at a proton-beam energy of 1 GeV.
Physics of Atomic Nuclei, 2009, Vol. 72, № 9, pp.1473-1476.
41. R.M. Carey, ..., G.D. Alkhazov, V.L. Golovtsov, P.V. Neustroev, L.N. Uvarov, A.A. Vasilyev, A.A. Vorobyov, M.B. Zhalov et al.
The new (g-2) experiment: A proposal to measure the muon anomalous magnetic moment to ± 0.14 ppm precision.
FERMILAB-PROPOSAL-0989, 2009. 129 pp.
42. A. Blanco-Covarrubias, ..., G.D. Alkhazov, A.G. Atamantchouk, N.F. Bondar, V.L. Golovtsov, V.T. Kim, L.M. Kochenda, A.G. Krivshich, N.P. Kuropatkin, V.P. Maleev, P.V. Neustroev, B.V. Razmyslovich, V. Stepanov, M. Svoiski, N.K. Terentyev, L.N. Uvarov, A.A. Vorobyov et al.
Nuclear dependence of charm production.
Eur. Phys. J. C64, 637-644, 2009.
43. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the top quark mass in final states with two leptons.
FERMILAB-PUB-09-125-E, 2009. 22 pp.
44. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for CP violation in semileptonic decays. $0sB$
FERMILAB-PUB-09-140-E, 2009. 7 pp.
45. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of the t-channel single top quark production cross section.
FERMILAB-PUB-09-372-E, 2009. 7 pp.
Submitted to Phys. Lett. B.

46. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Measurement of angular distributions in XjetZ^{++*}/γpp collisions at s= 1.96 TeV.
FERMILAB-PUB-09-373-E, 2009. 15 pp.
Submitted to Phys. Lett. B.
47. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Combined measurements of anomalous charged trilinear gauge-boson couplings from diboson production in pp collisions at s= 1.96 TeV.
FERMILAB-PUB-09-380-E, 2009. 9 pp.
48. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Search for charged Higgs bosons in top quark decays.
FERMILAB-PUB-09-393-E, 2009. 10 pp.
Submitted to Phys. Lett. B.
49. V.M. Abazov, ..., G.D. Alkhazov, A. Lobodenko, P. Neustroev, G. Odrant, Y. Scheglov, L. Uvarov, S. Uvarov et al.
Determination of the strong coupling constant from the inclusive jet cross section in pp collisions at s= 1.96 TeV.
FERMILAB-PUB-09-558-E, 2009. 7 pp.
Submitted to Phys. Rev. D.
50. V.V. Sarantsev, K.N. Ermakov, L.M. Kochenda, V.I. Medvedev, V.A. Nikonov, O.V. Rogachevsky, A.V. Sarantsev, S.G. Sherman, V.A. Trofimov, A.A. Vasiliev.
The study of the negative pion production in neutron-proton collisions at beam momenta below 1.8 GeV/c.
e-Print arXiv:0906.1946 [hep-ph], 2009. 6 pp.
51. G. Aad, ..., O.L. Fedin, V.P. Maleev, S.Y. Nesterov, Y.F. Ryabov, V.A. Schegelsky, D.M. Seliverstov et al.
Expected performance of the ATLAS experiment – detector, trigger and physics.
e-Print arXiv:0901.0512 [hep-ex], 2009. 1852 pp.
52. V.B. Gavrilov, V.T. Kim et al.
Asymptotic effects in jet production at high energies.
e-Print arXiv:0901.1985 [hep-ph], 2009. 3 pp.
53. A.L. Kataev, V.T. Kim.
Uncertainties of QCD predictions for Higgs boson decay into bottom quarks at NNLO and beyond.
e-Print arXiv:0902.1442 [hep-ph], 2009. 15 pp.
54. S. Chatrchyan, ..., N. Bondar, L. Chtchipounov, A. Denisov, Y. Gavrikov, G. Gavrilov, V. Golovtsov, Y. Ivanov, V. Kim, V. Kozlov, P. Levchenko, G. Odrant, E. Orishchin, A. Petrunin, Y. Shcheglov, A. Shchetkovskiy, V. Sknar, I. Smirnov, V. Sulimov, V. Tarakanov, L. Uvarov, S. Vavilov, G. Velichko, S. Volkov, A. Vorobyev et al.
Precise mapping of the magnetic field in the CMS barrel yoke using cosmic rays.
e-Print arXiv:0910.5530 [physics.ins-det], 2009. 37 pp.

55. G.D.Alkhazov, I.B.Smirnov, A.V. Kravtsov, A.N. Prokofiev.
Mechanism of Pion Production in alpha-p Scattering at 1 GeV/nucleon.
Preprint PNPI-2791, Gatchina, 2009. 27 p.
56. G.A. Korolev, G.D. Alkhazov, A.V. Dobrovolsky, A.V. Khanzadeev, A.A. Lobodenko,
A.A. Vorobyov.
Ratios of the Real to Imaginary Part of the p^4 He and pn Elastic Scattering
Amplitudes at 0.7 GeV.
Preprint PNPI-2810, Gatchina, 2009. 14 pp.
57. А.А.Воробьев. Участие в создании торцевой мюонной системы.
Сборник «В глубь материи: Физика XXI века глазами создателей экспериментального
комплекса на Большом адронном коллайдере в Женеве.» Изд-во Этерна, 2009 г.,
стр. 227- 246.
58. А.А.Воробьев. Петербургский институт ядерной физики им.Б.П.Константинова РАН.
Сотрудничество с американскими научными центрами. Книга Санкт-Петербург –
Соединенные Штаты Америки. 200 лет дипломатических отношений. (Серия «Санкт-
Петербург и мир»), Изд. Европейский дом, 2009, стр.400-409.
59. A.A.Vorobyov. Precision Measurement of the Rate of Nuclear Muon Capture in the Muonic
Hydrogen Atom and the Determination of the Pseudoscalar Form Factor of the Nucleon.
Phys. of Atomic Nuclei 72, N 1 (2009) 128-140.
60. P.Kashchuk, O. V.Levitskaya, ..., et al.
Pre-installation tests of the inner-most MWPCs for the LHCb Muon system.
CERN-LHCb-INT-2009-010, Geneva, 2009, 48 p.
61. A.P.Kashchuk and O.V.Levitskaya.
From noise to signal - a new approach to LHCb muon optimization.
CERN-LHCb-PUB-2009-018, Geneva, 2009, 31 p.