November 18, 2004

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Education

08/99-present

University of Florida, Gainesville, FL
Ph.D. in Physics expected in Spring 2005.
Thesis: *Fragmentation of Quark and Gluon Jets at CDF*
Advisor: Prof. A. Korytov

09/93-06/99

Moscow Institute of Physics and Technology (MIPT), Moscow, Russia
M.S. in Physics, *Summa Cum Laude* Diploma
Thesis: *Fast Algorithm for High Energy Muon identification with Muon Detector at Hera-B experiment.*
Advisor: Prof. Yu.M. Zaitsev

Honors & Awards

Elected Representative of the student body, 1994-1997 (MIPT, Moscow, Russia)

Excimer Fellowship for Academic Excellence and Leadership, 1995-1996 (MIPT, Moscow, Russia)

Experience

05/01-present

Research Assistant, University of Florida High Energy Group at CDF.

Study of fragmentation differences between quark and gluon jets at CDF in Run2 using charged particles from di-jet and γ+jet events: particle multiplicity and momentum distributions; multiplicity and energy flows.

Measurement of charged particle multiplicities in quark and gluon jets at CDF in Run1B: first model-independent measurement of quark and gluon jet properties using charged particles in $p\bar{p}$ collisions.

Studies of fragmentation properties of jets faking photons: developed a new method of evaluating real photon content based on isolation energy distributions (the method is independent and complementary to the official CDF methods based on the photon conversion rate and transverse shower profile)

Cherenkov Luminosity Counter (CLC) operations in Run2: PMT gain stability studies; testing and installing of the hardware components; monitoring and support of the hardware/software on the CLC detector; LED gain calibrations.

Cherenkov Luminosity Counter offline software: developed *in situ* pedestal and amplitude calibration procedure; responsible for pedestal and amplitude calibrations and CLC database support.

Training of UF graduate students: developed software framework for analyses on jet fragmentation in Run2; working with two junior graduate students and helping in their analyses on *Event shapes in $p\bar{p}$ collisions at CDF* and *Correlations of charged particles inside jets in $p\bar{p}$ collisions at CDF*

08/99-05/01 **Teaching Assistant**, University of Florida Department of Physics.

Grading assignment: Light, Color, and Holography, introductory level course for non-physics major students; *Electromagnetism 1,2*, undergraduate level course for physics major students.

Laboratory instructor: Electromagnetism with Calculus, undergraduate level course for non-physics major students.

06/97-06/99 **Undergraduate Research Assistant**, Institute of Theoretical and Experimental Physics (ITEP), Moscow, Russia.

Hardware: production and tests of proportional wire chambers of HERA-B Muon Detector.

Software: development of fast algorithm for high energy muon identification using Muon Detector at HERA-B experiment.

02/94-05/96 **Outreach and popularization of science**

Preparation and organization of regional and national level of physics olympiads for high school students (as a member of MIPT team of students and professors).

Computer Skills

Linux and Windows operating systems; C/C++, Fortran, Java, HTML, Tcl, Unix shell scripts, ROOT, PAW, Latex, Mathematica, Sigma Plot, Microsoft Office, Adobe Illustrator.

Publications

D. Acosta *et. al.* [CDF Collaboration], *Measurement of charged particle multiplicities in gluon and quark jets in $p\bar{p}$ collisions at $\sqrt{s} = 1.8$ TeV*, CDF-Note 6813, FERMILAB-PUB-04/112-E, submitted for publication in *Phys. Rev. Lett.*

A. Pronko [for CDF Collaboration], *Fragmentation differences of quark and gluon jets at Tevatron*, CDF-Note 7335, submitted for publication in *Int. Journal of Modern Physics.*

A. Pronko [for CDF Collaboration], *Jet Fragmentation in $p\bar{p}$ collisions*, CDF-Note 7357, submitted for publication in *Acta Physica Polonica B.*

D. Acosta, S. Klimenko, J. Konigsberg, A. Korytov, G. Mitselmakher, V. Necula, A. Nomerotsky, A. Pronko, A. Sukhanov, A. Safonov, D. Tsybychev, S.M. Wang, *The performance of the CDF Luminosity Monitor*, Nucl. Instrum. Meth. A494:57-62, 2002.

Co-author of 13 CDF journal articles.

Internal CDF Notes

A. Korytov, A. Pronko, A. Safonov, *Update on the measurement of charged particle multiplicities in gluon and quark jets*, CDF-Note 6809, Dec. 2003.

A. Korytov, A. Pronko, A. Safonov, *Measurement of the ratio of charged particle multiplicities in gluon and quark jets*, CDF-Note 5899, Jul. 2003 (last revision).

D. Acosta, R. Field, S. Klimenko, J. Konisberg, A. Korytov, G. Lungu, G. Mitslemakher, V. Necula, A. Pronko, A. Sukhanov, D. Tsybychev, S.M. Wang, *Studies for CLC acceptance using Monte Carlo*, CDF-Note 6056, Jul. 2002.

D. Acosta, R. Field, S. Klimenko, J. Konisberg, A. Korytov, G. Lungu, G. Mitslemakher, V. Necula, A. Pronko, A. Sukhanov, D. Tsybychev, S.M. Wang, M. Wong, *Estimation of CLC acceptance to Inelastic $p\bar{p}$ Interactions*, CDF-Note 6054, Jul. 2002.

J. Konigsberg, S. Klimenko, S.M. Wang, D. Tsybychev, A. Sukhanov, A. Pronko, V. Necula, D. Acosta, G. Mitselmakher, A. Korytov, G. Lungu, *A first look at the CLC Luminosity Measurements*, CDF-Note 6052, Jul. 2002.

J. Konigsberg, A. Pronko, A. Sukhanov, *CLC amplitude calibration*, CDF-Note 6046, Jul. 2002.

Conference Talks

Fragmentation differences of Quark and Gluon jets at Tevatron presented at the 2004 Meeting of Devision of Particles and Fields, APS, Riverside, CA, August 2004.

Jet Fragmentation in $p\bar{p}$ collisions presented at the 34^{th} International Symposium on Multiparticle Dynamics, Sonoma State University, CA, July 2004.

Fragmentation of Gluon jets presented at *The Future of QCD at the Tevatron* Workshop, Batavia, IL, May 2004.

Measurement of charged particle multiplicities in Gluon and Quark jets at CDF presented at the 2003 April Meeting of American Physical Society, Philadelphia, PA, April 2003.

Measurement of the ratio of charged particle multiplicities in Gluon and Quark jets presented at the 2002 April Meeting of American Physical Society, Albuquerque, NM, April 2002.

Selected CDF Talks

CLC Amplitude Calibration, CDF Detector Lectures, Oct. 2004.

Measurement of charged particle multiplicities in gluon and quark jets in $p\bar{p}$ collisions at $\sqrt{s} = 1.8\ TeV$, CDF Paper Seminar, Jun. 2004.

Measurement of charged particle multiplicities in gluon and quark jets, CDF QCD Meeting, Jul. 2003.

Jet fragmentation studies, CDF Collaboration Meeting, May 2002.

Summer Schools

CTEQ2002 Summer School, June 2-10, 2002, Madison, WI, USA (awarded full support).

DESY Summer Institute, Aug 2-Sep 20, 1998, Hamburg, Germany (awarded full support).