CURRICULUM VITAE - Andrej Gorišek

Education:

- Ph.D. in Physics, University of Ljubljana, Slovenia, 15 January 2003. The title of the thesis: *Cross section measurement of* D^0 *and* D^{*+} *meson production in inelastic collisions of* 920 **GeV** *protons with nuclei.*

- Master exam, passed with honors, February 2000.

- B.Sc. in Physics, University of Ljubljana, Slovenia. Graduated with honors, 17 June 1997.

- International Baccalaureate, Gimnazija Bežigrad, Graduated with honors in 1992.

Research experience:

- 1994-: collaboration with the Department of Experimental Particle Physics (Head: Prof. Dr. Marko Mikuž) at Jožef Stefan Institute (JSI) in Ljubljana, where I am employed since October 1997. Most of my work was done under supervision of Prof. Dr. Peter Križan.
- 2001-: Participation at tests performed for the future particle identification upgrade of the Belle spectrometer at KEK, Tsukuba, Japan.

- 1996-: member of HERA-B collaboration, DESY, Hamburg, Germany.

2000-: I was responsible for the global alignment of HERA-B spectrometer. The work involved aligning the sub detectors relative to each other on the basis of reconstructed charged particle tracks. The work was additionally complicated by the fact that the tracks were curved in the magnetic field. The work is summarized as a part of my Ph. D. thesis.

2000-: I also participated in the analysis of acquired data in the HERA-B experiment. I concentrated especially in measuring the production processes for charmed mesons. This was the main topic of my Ph. D. thesis. This work is still ongoing and is converging toward a publication.

1996-2003: I took an active role in instalation, assembly and commissioning of the Ring Imaging Cherenkov Detector (RICH) of HERA-B spectrometer, which involved quality assessment of the photo multipliers and printed circuit boards, production and testing of signal and supply cables and the assembly of the photon detector.
I was in charge for development and maintenance of the monitoring system for the photon detector of the RICH sub detector. I also took regular expert shifts for the RICH sub detector.

1996-97: diploma work on the HERA-B experiment at DESY Institute in Hamburg, Germany. In parallel I took part in conducting background measurements in the experimental area, which included producing, testing and installing several scintillation counters. In my diploma thesis I developed a method for aligning the mirror optical system for RICH sub detector of HERA-B spectrometer.

- 1994-95: I gained some experience working with the test setup for position emission tomography (PET), both from hardware (scintillation counters, multi-wire proportional chambers) and software (attenuation correction, reconstruction of source distribution, etc.) point of view.

- 1996: I participated in a research project in Mössbauer spectroscopy at St. Andrews University in Scotland where I worked as a exchange student. The work was summarized in an article, published in a renowned journal.

Participation at workshops and conferences:

- Quark Matter 2004, 17th International Conference on Ultra Relativistic Nucleus Nucleus Collisions, Oakland, California, USA, 11-17 January 2004. Talk.

- 10th ICFA School on Instrumentation in Elementary Particle Physics, Itacuruça, Rio de Janeiro, Brazil, December 8 - 20, 2003. **Invited lab course organizer**

- Frontier Detectors for Frontier Physics, 9^{th} Pisa Meeting on Advanced Detectors, La Biodola, Elba, Italy, May 25-31 2003. Poster contribution.

- First Regional ICFA Instrumentation School, Istanbul, Turkey, June 17-28 2002. **Invited lab course organizer**

- 2001 European School on High-Energy Physics, Beatenberg, Switzerland, 26 August - 8 September 2001.

- 9th ICFA Instrumentation School, Faure, Cape Town, South Africa, National Accelerator Center, 28.3.-6.4.2001. **Invited lab course organizer**

- 8th ICFA Instrumentation School, Istanbul, Turkey, 28 June - 10 July, 1999. **Invited lab course organizer**

- The Fifth College on Microprocessor-Based Real-Time Systems in Physics, The Abdus Salam ICTP, Trieste, Italy, 12 October 1998 - 6 November 1998.

- In August 1997 I was at DESY Institute as a summer student. I worked on testing the RICH detector components for HERA-B experiment.

Teaching experience:

- 2004- teaching assistant for Electronics and Electronic Circuits for students of physics at Faculty of Mathematics and Physics.

- 2001- teaching assistant for Problems in Physics for textile engineers at Faculty of Natural Sciences and Technology.

- 2000- teaching assistant for Experimental Physics IV for students of physics at Faculty of Mathematics and Physics.

- 1997-2000 teaching assistant for Experimental Physics I for students of physics at Faculty of Mathematics and Physics.

- I was a teaching assistant at Biophysics Institute at Medical Faculty in 1995/96 and 1996/97. I worked with freshmen student of medicine at their experimental work in physics.

Other achievements:

- 1997: I was awarded student Prešeren Award for my outstanding diploma work.

- 1992: I represented Slovenia at The 24th International Chemistry Olympics in Pittsburgh and Washington USA.

Bibliography

A. Original Scientific Article

1. Kilcoyne S. H., Gorišek, A.. Magnetic properties of iron dextran. J.Magn.Magn.Mater., vol. 177-181, pp 1457-1458, 2 pages (1998)

2. Korpar S., Gorišek A., et al. (26 authors) The HERA-B RICH. Nucl.Instrum.Meth., A433, pp 128-135, 8 pages (1999)

3. Križan P., Gorišek A., et al. (25 authors) The physics potential of the HERA-B RICH. Nucl.Instrum.Methods, A433, pp 357-365, 9 pages (1999)

4. Gorišek A., et al. (4 authors) Alignment of the HERA-B RICH optical system with data. Nucl.Instrum.Methods, A433, pp 408-412, 5 pages (1999)

5. LAU K., Gorišek A., et al. (29 authors) The first year of the HERA-B rich. IEEE Trans.Nucl.Sci., vol. 47, pp 789-792, 4 pages (2000)

6. Korpar S., Gorišek A., et al. (7 authors) Multianode photomultipliers as position-sensitive detectors of single photons. Nucl.Instrum.Meth., A442, pp 316-321, 6 pages (2000)

7. Ariño I., Gorišek A., et al. (27 authors) The HERA-B RICH. Nucl.Instrum.Meth., A453, pp 289-295, 7 pages (2000)

8. Križan P., Gorišek A., et al. (27 authors) The performance of the HERA-B RICH at high track densities. Nucl.Instrum.Meth., A471, pp 30-34, 5 pages (2001)

9. HERA-B Collaboration (I. Abt et al. - 308 authors), Measurement of the b anti-b Production Cross-Section in 920 GeV Fixed Target Proton Nucleus Collisions. Eur.Phys.J., C26, pp 345-355, 11 pages (2003) - (hep-ex/0205106)

10. HERA-B Collaboration (I. Abt et al. - 308 authors), J/Psi Production via Chi(C) Decays in 920 GeV pA Interactions. Phys.Lett., vol. B561, pp 61-72, 10 pages (2003) - (hep-ex/0211033)

11. HERA-B Collaboration (I. Abt et al. - 309 authors), Inclusive V0 Production Cross-Section from 920 GeV Fixed Target Proton Nucleus Collisions. Eur.Phys.J., C29, pp 181-190, 10 pages (2003) - (hep-ex/0212040)

12. Ariño I., Gorišek A., et al. (27 authors) The HERA-B Ring Imaging Cerenkov Counter. Nucl.Instrum.Meth., A516, pp 445-461, 17 pages (2004) - (hep-ex/0303012)

13. Gorišek A., Particle identification performance of the HERA-B RICH. Nucl.Instrum.Meth., A518/1-2, pp 590-592, 3 pages (2004)

B. Published Scientific Conference Contribution

1. Križan P., Gorišek A., et al. The HERA-B RICH. V: Nalcioglu O. (ed.). 1997 IEEE Nuclear Science Symposium, November 9 - 15, 1997, Albuquerque, New Mexico. Piscataway: IEEE, cop. 1998, pp 353-356, 4 pages.

2. Korpar S., Križan P., Gorišek A., Stanovnik A. Tests of a position sensitive photomultiplier and measurement of diffraction pattern by counting single photons. V: Kartal S. (ed.). Instrumentation in elementary particle physics: VIII ICFA School, Istanbul, Turkey 28 June-10 July, 1999, (AIP conference proceedings, 536). Woodbury: American Institute of Physics, 2000, pp 340-348, 9 pages.

3. Garrido L., Gorišek A., et al. The HERA-B RICH. V: Nuclear Science Symposium, Lyon, France, October 15-120, 2000. 2000 IEEE: conference record. Piscataway: IEEE, 2001, pp 11-13-11-16, 4 pages.

4. Korpar S., Gorišek A., et al. Tests of a proximity focusing RICH with aerogel as radiator. V: 2001 IEEE Nuclear Science Symposium Conference Record, 4-10 November 2001, San Diego, California, USA. Piscataway: IEEE, cop. 2002.

5. Korpar S., Gorišek A., et al. Surface sensitivity of multianode photomultiplier tubes : presented at Ninth International Conference on Instrumentation, Vienna, Austria, February 19-23, 2001. Nucl.Instrum.Meth. A478, pp 391-394, 4 pages (2002)

6. PESTOTNIK R., Gorišek A., et al. Lens-based collection system for a proximity focusing RICH : presented Beaune 2002, Third Internation Conference on New Developments in Photon Detector, Beaune, France, June 17-21, 2002. Nucl.Instrum.Meth. A504, pg 237-239, 3 pages (2003)

7. Adachi I., Gorišek A., et al. Tests of a Proximity Focusing RICH with Aerogel as Radiator. Dec 2002. 4pp Prepared for 4th Workshop on RICH Detectors: Dedicated to the Memory of Tom Ypsilantis (RICH 2002), Pylos, Greece, 5-10 Jun 2002. Nucl.Instrum.Meth., A502: 231-235 (2003), IEEE Trans.Nucl.Sci. 50: 1142-1146, 5 pages (2003) - e-Print Archive: hep-ex/0303038

8. Gorišek A., Charmed and strange particle production at mid-rapidity with the HERA-B detector, talk given at Quark Matter conference in Oakland, USA, 11-17 January 2004, to be published in Journal of Physics G.

C. Published Scientific Conference Contribution Abstract

1. Korpar S., Gorišek A., et al. The HERA-B RICH. V: the 3rd International Workshop on Ring Imaging Cherenkov Detectors, a Research Workshop of the Israel Science Foudation, Ein-Gedi, Dead-Sea, Israel, November 15-20, 1998. Programe and abstracts : RICH 98. [S.n.]: Weizmann Institute of Science, The Department of Particle Physics, 1998, pp 51.

D. Doctoral Dissertation

1. Gorišek A.: Cross section measurement of D^0 and D^{*+} meson production in inelastic collisions of 920 GeV protons with nuclei : thesis. Ljubljana: 2003. 159 pages.

E. Invited Lecture at Foreign University

1. Stanovnik A., Korpar S., Gorišek A. Multianode photomultipliers for measurement of Cherenkov rings and diffraction of single photons: invited lecturer at 9th ICFA Instrumentation School 28.3.-6.4.2001. Faure, Cape Town: National Accelerator Center, 2001.

2. Križan P., Gorišek A., Korpar S., Stanovnik A. Ring imaging Cerenkov counters: invited lecture at First Regional ICFA Instrumentation School. Istanbul: Istanbul Technical University, 17-28 June 2002.

3. Korpar S., Gorišek A., Križan P., Stanovnik A. Ring imaging Cerenkov counters: invited lecture at 10th ICFA Instrumentation School. Hotel Pierre, Itacuruça, Brazil, 8-20 December, 2003.

The following above-mentioned papers have evolved from my doctoral thesis or my thesis is based on them:
A. 12., A. 13., B. 8.;
Analysis paper on open-charm production cross section and ratios, which also has my strong contribution, is still under development and discussion in the HERA-B collaboration and will be submitted for publishing by the end of the year.