

SMI: Publications 2008

Peer reviewed

C. Schwarz, D. Bettoni, D. Branford, V. Carassiti, A. Cecchi, V.Kh. Dodokhof, M. Düren, K. Föhl, R. Hohler, R. Kaiser, A. Lehmann, D. Lehmann, J. Marton, K. Peters, G. Schepers, L. Schmitt, P. Schönmeier, B. Seitz, C. Sfienti, A. Teufel, A.S. Vodopianov, "The barrel DIRC of the PANDA experiment", Nuclear Instruments and Methods in Physics Research A 595, (2008), 112-115

M. Hoek, E.D. Bennet, D. Branford, E.N. Cowie, M. Düren, K. Föhl, D. Glazier, R. Kaiser, A. Lehmann, S. Lu, J. Marton, R. Ostendorf, G. Schepers, C. Schwarz, B. Seitz, A. Teufel, D. Watts, "Radiation hardness study on fused silica", Nuclear Instruments and Methods in Physics Research A 595, (2008), 190-193

K. Föhl, D. Bettoni, D. Branford, A. Britting, V. Carassiti, A. Cecchi, V.Kh. Dodokhof, M. Düren, M. Ehrenfried, W. Eyrich, D.I. Glazier, M. Hoek, R. Hohler, R. Kaiser, A. Lehmann, D. Lehmann, S. Lu, J. Marton, O. Merle, K. Peters, C. Pizzolotto, G. Rosner, G. Schepers, R. Schmidt, L. Schmitt, P. Schönmeier, C. Schwarz, B. Seitz, C. Sfienti, K. Suzuki, A. Teufel, A.S. Vodopianov, D.P. Watts, "The DIRC detectors of the PANDA experiment at FAIR", Nuclear Instruments and Methods in Physics Research A 595, (2008), 88-91

M. Sato, H. Bhang, J. Chiba, Seonho Choi, Y. Fukuda, T. Hanaki, R.S. Hayano, M. Iio, T. Ishikawa, S. Ishimoto, T. Ishiwatari, K. Itahashi, M. Iwai, M. Iwasaki, e, P. Kienle, J.H. Kim, Y. Matsuda, H. Ohnishi, S. Okada, H. Outa, S. Suzuki, T. Suzuki, D. Tomono, E. Widmann, T. Yamazaki, and H. Yim, "Search for strange tribaryon states in the inclusive $4\text{He}(\text{K-stopped},\text{p})$ reaction", Physics Letters B 659, doi:10.1016/j.physletb.2007.11.024, 107

M. Iwasaki, H. Bhang, J. Chiba, S. Choi, Y. Fukuda, T. Hanaki, R.S. Hayano, M. Iio, T. Ishikawa, S. Ishimoto, T. Ishiwatari, K. Itahashi, M. Iwai, P. Kienle, J.H. Kim, Y. Matsuda, H. Ohnishi, S. Okada, H. Outa, M. Sato, S. Suzuki, T. Suzuki, D. Tomono, E. Widmann, T. Yamazaki, and H. Yim, "Kaonic nuclear state search via K- reaction at rest on 4He target", Nuclear Physics A 804, doi:10.1016/j.nuclphysa.2008.02.303, 186

J. Zmeskal, "From kaonic atoms to kaonic nuclei: A search for antikaon-mediated bound nuclear systems", Progress in Particle and Nuclear Physics 61, (2008), 512-550

A.N. Ivanov, M. Faber, R. Reda and P. Kienle, "Weak decays of H-like 140Pr^{58+} and He-like 140Pr^{57+} ions", Physical Review C 78, 025503,

T. Pask, D. Barna, A. Dax, R. S. Hayano, M. Hori, D. Horváth, B. Juhász, C. Malbrunot, J. Marton, N. Ono, K. Suzuki, J. Zmeskal, E. Widmann, "The Improved Study of the Antiprotonic Helium Hyperfine Structure", J. Phys. B: At. Mol. Opt. Phys. 41, 081008, [Link](#)

Yu.A. Litvinov, F. Bosch, N. Winckler, D. Boutin, H.G. Essel, T. Faestermann, H. Geissel, S. Hess, P. Kienle, R. Knöbel, C. Kozuharov, J. Kurcewicz, L. Maier, K. Beckert, P. Beller, C. Brandau, L. Chen, C. Dimopoulou, B. Fabian, A. Fragner, E. Haettner, M. Hausmann, S.A. Litvinov, M. Mazzocco, F. Montes, A. Musumarra, C. Nociforo, F. Nolden, W. Plaß, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stöhlker, S. Torilov, M. Trassinelli, B. Sun, H. Weick, M. Winkler, "Observation of non-

exponential orbital electron capture decays of hydrogen-like ^{140}Pr and ^{142}Pm ions", Physics Letters B 664, (2008), 162–168

L. Sperandio, S. Bartalucci, S. Bertolucci, M. Bragadireanu, M. Cargnelli, M. Catitti, C. Curceanu (Petrascu), S. Di Matteo, J.-P. Egger, C. Guaraldo, M. Iliescu, T. Ishiwatari, M. Laubenstein, J. Marton, E. Milotti, D. Pietreanu, T. Ponta, D.L. Sirghi, F. Sirghi, O. Vazquez Doce, E. Widmann, J. Zmeskal, "New limit on the Pauli Exclusion Principle violation by electrons", Nuovo Cimento B 122, Issue 06-07, pp 641-647 [Link](#)

Conference Proceedings and longer articles without peer-review of professional journals

E. Widmann, "The hyperfine structure of antiprotonic helium and the antiproton magnetic moment", Proceedings of the International Conference on Muon Catalyzed Fusion and Related Topics (μCF), Dubna, JINR 2008, p. 159

M. Bazzi, G. Beer, L. Bombelli, A. M. Bragadireanu, M. Cargnelli, M. Catitti, C. Curceanu, C. Fiorini, T. Frizzi, F. Ghio, B. Girolami, C. Guaraldo, M. Iliescu, T. Ishiwatari, P. Kienle, P. Lechner, P. Levi Sandri, V. Lucherini, A. Longoni, J. Marton, K. Nikolic, D. Pietreanu, T. Ponta, , D. L. Sirghi, F. Sirghi, H. Soltau, L. Strüder, O. Vazquez Doce, E. Widmann, J. Zmeskal, "New precision measurements of the strong interaction in kaonic hydrogen", Proceedings of the International Conference on Muon Catalyzed Fusion and Related Topics (μCF), Dubna, JINR 2008, p. 214

R. S. Hayano, G. Beer, H. Bhang, M. Cargnelli, J. Chiba, S. Choi, C. Curceanu, Y. Fukuda, T. Hanaki, M. Iio, T. Ishikawa, S. Ishimoto, T. Ishiwatari, K. Itahashi, M. Iwai, M. Iwasaki, B. Juhász, P. Kienle, J. Marton, Y. Matsuda, H. Ohnishi, S. Okada, H. Outa, M. Sato, P. Schmid, S. Suzuki, T. Suzuki, H. Tatsuno, D. Tomono, E. Widmann, T. Yamazaki, H. Yim, J. Zmeskal, "Solving the Kaonic-Helium Puzzle", Modern Physics Letters A 23, (2008), Proceedings for the International Workshop on Chiral Symmetry in Hadron and Nuclear Physics (CHIRAL07), 2505 - 2511 [Link](#)

C. Curceanu, J. Zmeskal, "Kaonic Atoms/Nuclei Measurements at DAΦNE: SIDDHARTA and AMADEUS", Modern Physics Letters A 23, Proceedings for the International Workshop on Chiral Symmetry in Hadron and Nuclear Physics (CHIRAL07), 2524 - 2527 [Link](#)

E. Widmann, "Fundamental Tests with Trapped Antiprotons", Lecture Notes in Physics 749, in: Trapped Charged Particles and Fundamental Interactions, Springer, Heidelberg 2008, DOI 10.1007/978-3-540-77817-2 6, pp. 155-188

J. Marton, M. Bazzi, M. Catitti, C. Curceanu (Petrascu), C. Guaraldo, M. Iliescu, P. Levi Sandri, V. Lucherini, D. Pietreanu, D.L. Sirghi, F. Sirghi, O. Vazquez Doce, M. Cargnelli, T. Ishiwatari, P. Kienle, K. Nikolic, E. Widmann, J. Zmeskal, G. Beer, L. Bombelli, C. Fiorini, T. Frizzi, A. Longoni, A.M. Bragadireanu, T. Ponta, F.Ghio, B. Girolami, P. Lechner, H. Soltau and L. Strüder, "Low-energy kaon-nucleon interaction studies with x-ray spectroscopy", Proc. XLVI Winter Meeting on Nucl. Physics, Bormio , Ricerca Scientifica ed Educazione Permanente N.129, eds. I. Iori, A. Tarantola, Milan, p. 121

J. Marton, M. Cargnelli, T. Ishiwatari, E. Widmann, J. Zmeskal, "A new high sensitivity test of the Pauli Exclusion Principle", Proc. 1st AFI Symposium „From the Vacuum to the Universe“, Innsbruck, 19-20 October 2007, Conference Series, Innsbruck University Press, eds. S.D. Bass, F. Schallhart and B. Tasser, Innsbruck, 2008, p.40

D. Gotta, F. Amaro, D. F. Anagnostopoulos, S. Biri, D. S. Covita, H. Gorke, A. Gruber, M. Hennebach, A. Hirtl, T. Ishiwatari, P. Indelicato, Th. Jensen, E.-O. Le Bigot, J. Marton, M. Nekipelov, J. M. F. dos Santos, S. Schlessler, Ph. Schmid, L. M. Simons, Th. Strauch, M. Trassinelli, J. F. C. A. Veloso and J. Zmeskal, "Pionic Hydrogen", Lecture Notes in Physics 745, (2008), DOI 10.1007/978-3-540-75479-4_10, 165-186 [Link](#)

D. Gotta, F. Amaro, D.F. Anagnostopoulos, S. Biri, D.S. Covita, H. Gorke, A. Gruber, M. Hennebach, A. Hirtl, T. Ishiwatari, P. Indelicato, Th. Jensen, E.-O. Le Bigot, J. Marton, M. Nekipelov, J.M.F. Dos Santos, S. Schlessler, Ph. Schmid, L.M. Simons, Th. Strauch, M. Trassinelli, J.F.C.A. Veloso, J. Zmeskal, "Conclusions from recent pionic-atom experiments", Proceedings of the Workshop on Cold Antimatter Plasmas and Application to Fundamental Physics , Volume 1037, (2008), pp. 162-177 [Link](#)

C. Curceanu Petrascu, S. Bartalucci, S. Bertolucci, M. Bragadireanu, M. Cargnelli, M. Catitti, S. Di Matteo, J.-P. Egger, C. Guaraldo, M. Iliescu, T. Ishiwatari, M. Laubenstein, J. Marton, E. Milotti, D. Pietreanu, T. Ponta, D.L. Sirghi, F. Sirghi, L. Sperandio, O. Vazquez Doce, E. Widmann, J. Zmeskal, "New experimental limit on Pauli Exclusion Principle violation by electrons (the VIP experiment)", Proceedings of the XLVI International Winter Meeting on Nuclear Physics , Bormio, Italy, January 20-26, 2008 [Link](#)

S. Bartalucci, S. Bertolucci, M. Bragadireanu, M. Cargnelli, M. Catitti, C. Curceanu, S. Di Matteo, J. -P. Egger, C. Guaraldo, M. Iliescu, T. Ishiwatari, M. Laubenstein, J. Marton, E. Milotti, D. Pietreanu, T. Ponta, D. L. Sirghi, F. Sirghi, L. Sperandio, E. Widmann and J. Zmeskal, "VIP: An Experiment to Search for a Violation of the Pauli Exclusion Principle", Meson 2006 , Cracow, 9-13 June 2006, quant-ph/0608088

T. Pask, D. Barna, A. Dax, R. S. Hayano, M. Hori, D. Horváth, B. Juhász, C. Malbrunot, J. Marton, N. Ono, K. Suzuki, J. Zmeskal, E. Widmann, "Collisional Effects on the Antiprotonic Helium Hyperfine Structure Measurement", AIP Conference Proceedings of the Pbar08 Conference , on Cold Antimatter Plasmas and Application to Fundamental Physics, Japan, Okinawa, (2008)

Ph.D. and Masters Theses

A. Hirtl, "Determination of the Strong Interaction Ground State Width in Pionic Hydrogen" PhD Thesis, Technische Universität Wien (2008).

T. Pask, "A Precision Measurement of the Antiprotonic Helium Hyperfine Structure" PhD Thesis, Universität Wien (2008).

M. Kasprzak, "Ultracold Neutron Converters" PhD Thesis, Universität Wien (2008).