

Publications

Stefan Baeßler

1. D. Roulier, G. Freche, S. Baeßler, B. Clément, V. Nesvizhevsky, G. Pignol, D. Rebreyend, E. Lychagin, F. Vezzu, “*Design and test of a compact and high-resolution time of flight measurement device for cold neutron beams*”, in preparation
2. N. Fomin, S. Baeßler et al., “*Measurement of the Parity-Violating directional Gamma-ray Asymmetry in Polarized Neutron Capture on ^{35}Cl* ”, in preparation
3. N. Fomin, S. Baeßler et al., “*NPDGamma: Measurement of the Parity-Violating directional Gamma-ray Asymmetry in Polarized Neutron Capture on Protons*”, in preparation
4. Z. Tang, S. Baeßler et al., “*Measurement of Parity Violation in the Capture of Polarized Neutrons on ^{27}Al* ”, in preparation
5. L. J. Broussard, R. Alarcon, S. Baeßler, L. Barrón-Palos, N. Birge, T. Bode, J. D. Bowman, T. Brunst, J. Byrne, J.R. Calarco, J. Caylor, T. Chupp, V. Cianciolo, C. Crawford, G.W. Dodson, J. Dubois, W. Fan, W. Farrar, N. Fomin, E. Frlež, J. Fry, M.T. Gericke, F. Glück, G.L. Greene, R.K. Grzywacz, V. Gudkov, C. Hendrus, F.W. Hersman, T. Ito, H. Li, N. Macsai, M. F. Makela, J. Mammei, R. Mammei, J. Martin, M. Martinez, P. L. McGaughey, S. Meertens, J. Mirabal-Martinez, P. Mueller, S.A. Page, S.I. Penttilä, R. Picker, B. Plaster, D. Počanić, D.C. Radford, J. Ramsey, K.P. Rykaczewski, A. Salas-Bacci, E.M. Scott, A. Sprow, E. Stevens, J. Wexler, R. Whitehead, W.S. Wilburn, A.R. Young, B.A. Zeck, “*Neutron decay correlations in the Nab experiment*”, submitted to Rev. Mex. Fis.
6. J. Fry, R. Alarcon, R. Allen, E. Askanazi, S. Balascuta, L. Barron-Palos, S. Baeßler, A. Barzilov, C. Blessinger, D. Blyth, J.D. Bowman, J. R. Calarco, T. E. Chupp, C. E. Coppola, C. Crawford, K. Craycraft, M. Dabaghyan, D. Evans, J. Favela, C. Fieseler, N. Fomin, W. Fox, S. Freedman, E. Frlež, C. Fu, C. Garcia, I. Garishvili, M.T. Gericke, R. C. Gillis, K. Grammer, G.L. Greene, J. Hamblen, C. Hayes, F.W. Hersman, T. Ino, E.B. Iverson, G.L. Jones, L. Kabir, S. Kucucker, B. Lauss, Y. Li, R. Mahurin, M. Maldonado-Velazquez, M. McCrea, Y. Masuda, J. Mei, R. Milburn, G.S. Mitchell, P. Mueller, S. Muto, M. Musgrave, H. Nann, I. Novikov, S. Page, D. Parsons, D. Počanić, S.I. Penttilä, W.D. Ramsay, A. Salas-Bacci, S. Santra, P.-N. Seo, E. Sharapov, M. Sharma, F.

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5. R. Alarcon, L.P. Alonzi, S. Baeßler, S. Balascuta, J.D. Bowman, M.A. Bychkov, J. Byrne, J.R. Calarco, T.V. Cianciolo, C. Crawford, E. Frlež, M.T. Gericke, F. Glück, G.L. Greene, R.K. Grzywacz, V. Gudkov, F.W. Hersman, A. Klein, M.C. Lehman, J. Martin, S.T. McGovern, S. Page, A. Palladino, S.I. Penttilä, D. Počanić, K.P. Rykaczewski, W.S. Wilburn, A. Young, “Precise Measurement of $\lambda = G_A/G_V$ and Search for Non-(V-A) Weak Interaction Terms in Neutron Decay”, Funding proposal for the neutron decay spectrometer Nab at SNS to DOE, submitted in January 2010.
(DOE funding has been received for the proposed project with the exception of the magneto-electrostatic spectrometer that is supported by the MRI mentioned above.)
6. R. Alarcon, L.P. Alonzi, S. Baeßler, S. Balascuta, J.D. Bowman, M.A. Bychkov, J. Byrne, J.R. Calarco, T.V. Cianciolo, C. Crawford, E. Frlež, M.T. Gericke, F. Glück, G.L. Greene, R.K. Grzywacz, V. Gudkov, F.W. Hersman, A. Klein, J. Martin, S. Page, A. Palladino, S.I. Penttilä, D. Počanić, K.P. Rykaczewski, W.S. Wilburn, A. Young, “*Precise Measurement of the Neutron Beta Decay Parameters ‘a’ and ‘b’*”, Proposal update for the neutron decay spectrometer Nab at SNS to Proposal Review Advisory Committee, submitted in October 2009.
(reviewed and recommended for funding and beam time allocation by Proposal Advisory Committee in October 2009)
7. R. Alarcon, S. Balascuta, A. Klein, W.S. Wilburn, M.T. Gericke, J.R. Calarco, F.W. Hersman, A. Young, J.D. Bowman, T.V. Cianciolo, S.I. Penttilä, K.P. Rykaczewski, G.R. Young, V. Gudkov, G.L. Greene, R.K. Grzywacz, L.P. Alonzi, S. Baeßler, M.A. Bychkov, E. Frlež, A. Palladino, D. Počanić, “Precise Measurement of the Neutron Beta Decay Parameters ‘a’ and ‘b’”, Proposal for an Experiment at the Spallation Neutron Source, submitted in November 2007.
(reviewed and approved by Proposal Advisory Committee in January 2008)
8. R. Alarcon, S. Balascuta, S. Baeßler, E. Frlež, D. Počanić, L. Barrón Palos, J.D. Bowman, T.V. Cianciolo, S.I. Penttilä, K.P. Rykaczewski, G.R. Young, J.R. Calarco, F.W. Hersmann, V. Cirigliano, A. Danagoulian, T. Ito, A. Klein, J. Ramsey, W.S. Wilburn, T.E. Chupp, M. Sharma, C. Crawford, T.R. Gentile, M. Gericke, A. Micherdzinska, S. Page, G.L. Greene, R.K. Grzywacz, V. Gudkov, G.L. Jones, J. Martin, P.N. Seo, “*Precise Measurement of Neutron Decay Parameters - The abBA Experiment*”, Funding proposal to Proposal Review Advisory Committee, submitted in November 2007.

(reviewed and deferred for technical reasons by Proposal Advisory Committee in January 2008)

9. Ricardo Alarcon, Septimiu Balascuta, Alexander Komives, Gordon Jones, Earl Babcock, Chris Crawford, Tim Chupp, Rob Cooper, Archis Joglekar, Monisha Sharma, Libertad Barron Palos, Jeff Nico, H. Pieter Mumm, M. Scott Dewey, Tom Gentile, Alan Thompson, Geoffrey Greene, Hal Lee, Seppo Penttila, Vladimir Gudkov, Jim Byrne, Fred Wietfeldt, Stefan Baessler, L.Pete Alonzi, Emil Frlež, Dinko Počanić, "*PANDA - Precision Measurement of the Proton Asymmetry in Neutron Decay*", Funding proposal to Proposal Review Advisory Committee, submitted in November 2007.

(reviewed and deferred for technical reasons by Proposal Advisory Committee in January 2008)

Talks:

1. “Beyond-standard model physics searches in neutron and nuclear beta decay”, invited talk to the 1st International Workshop on “3D Parton Distributions: path to the LHC“, Frascati, November 2016
2. “Nuclear and Neutron Physics Tests of CKM Unitarity - Overview and Motivation”, invited talk to Mini-symposium at DNP meeting, Vancouver, October 2016
3. “Fundamental physics at the spallation neutron source - the Nab experiment”, seminar talk, ANL, Chicago, October 2016
4. “Fundamental physics at the spallation neutron source - the Nab experiment”, invited talk to XXIII International Baldin seminar on high energy physics problems, Dubna, September 2016
5. “The measurement of neutron beta decay observables with the Nab spectrometer”, SESAPS 2015, Mobile, AL, November 2015
6. “The measurement of neutron beta decay observables with the Nab spectrometer“, invited talk to the Twelfth Conference on the Intersections of Particle and Nuclear Physics (CIPANP), Vail, CO, May 2015
7. “WG1 Summary -- The determination of V_{ud} ”, Summary talk at the CKM2014 Workshop, Vienna, September 2014
8. “Fundamental Physics at the Spallation Neutron Source”, Seminar talk at the Atominstitut of TU-Vienna, March 2014
9. “Frequency shifts in gravity resonance spectroscopy”, Talk at workshop GRANIT-2014, Les Houches, March 2014
10. Seminar talk at the University of Mainz, November 2013
11. “Frequency shifts in gravity resonance spectroscopy”, Contributed Talk at DNP meeting, Newport News, October 2013
12. “Fundamental Physics with Neutrons”, Seminar talk at University of Sussex, Brighton, UK, April 2013
13. Summary talk at the ESS Science Symposium on Neutron Particle Physics at Long-Pulse Spallation Sources, Grenoble, March 2013
14. “Fundamental physics with free neutrons”, colloquium at U Virginia, September 2012
15. “‘Gravity’ and other experiments with UCN’s”, Lecture at “2012 TRIUMF Summer Institute (TSI) and 2012 US Summer School on Fundamental Neutron Physics”, Vancouver, August 2012
16. “Neutron beta decay studies with the Nab spectrometer at the Spallation Neutron Source”, contributed talk at CIPANP 2012 (Intersections between Nuclear and Particle Physics), St. Petersburg / Florida, May 2012
17. Seminar talk at Institut Laue-Langevin, Grenoble, July 2011
18. Seminar talk at NIST, Gaithersburg, May 2011
19. Invited talk at the Symposium on Nuclear Physics, Hacienda Cocoyoc, Morelos, Mexico, January 2011
20. Invited talk at 77th Annual Meeting of SESAPS, Baton Rouge, October 2010
21. Invited talk at the NAPP-10 conference, Dubrovnik, Croatia, October 2010
22. Invited talk at the GR-19 conference, Mexico City, July 2010
23. Two invited talks at the workshop GRANIT 2010, Les Houches, February 2010
24. Colloquium at U Virginia, January 2010
25. Invited Talk at the UCN Workshop in Santa Fe, November 2009

26. Lecturer at Fundamental Neutron Physics Summer School, Gaithersburg, June 2009
27. Invited Talk at the International Conference on Neutron Scattering (ICNS 2009), May 2009
28. Colloquium at U Virginia, December 2008
29. Invited Talk at Annual Fall meeting of the DNP, Oakland, October 2008
30. Summary talk of Workshop Nuclear Physics for one of the 3 topics (which was “Precision Measurements with Neutrons”), Schleching 2008
31. Seminar talk NCSU, Raleigh, December 2007
32. Seminar talk NIST, Gaithersburg, November 2007
33. Invited talk at 74th Annual Meeting of SESAPS, Nashville, November 2007
34. Seminar talk at TU München, November 2007
35. Seminar talk at the University of Kentucky, Lexington, October 2007
36. Contributed talk at Annual Fall meeting of the DNP, Newport News, October 2007
37. Invited talk at the “International Workshop - UCN Sources and Experiments”, Vancouver, September 2007
38. Seminar Talk at KFI Groningen, June 2007
39. Seminar Talk at U Mainz, May 2007
40. Two invited Talks at INT Workshop INT-07-01, Univ. Washington, Seattle, May 2007
41. Seminar Talk at U Virginia, Charlottesville, April 2007
42. Seminar Talk at U Münster, November 2006
43. Seminar Talk at Forschungsreaktor München-2, TU-München, November 2006
44. Contributed Talk at CIPANP 2006 (Intersections between Nuclear and Particle Physics), Puerto Rico, June 2006
45. Group Talk at the Annual Meeting of the DPG (the German Physical Society), München, March 2006
46. Contributed Talk at Workshop „Fundamental Physics with Neutrons“ at NIST, Gaithersburg, March 2005
47. Group Talk at the Annual Meeting of the DPG (the German Physical Society), Berlin, March 2005
48. Seminar Talk at the Institut für Kernchemie, University of Mainz, January 2005
49. Seminar Talk at the „Institutstag“, University of Mainz, July 2004
50. Seminar Talk at the Nucl. Phys. Lab., University of Washington, Seattle, May 2004
51. Seminar Talk at TRIUMF, Vancouver, May 2004
52. Invited Talk at Annual Spring meeting of the APS, Denver, April 2004