

Biographical Sketch Georg Bollen

Affiliation

Facility for Rare Isotope Beams
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Education and Training

Johannes Gutenberg University, Mainz, Germany	Physics	Diploma	1984
Johannes Gutenberg University, Mainz, Germany	Physics	PhD	1989
Johannes Gutenberg University, Mainz, Germany	Physics	Habilitation	1996

Appointments

Michigan State University, Univ. Distinguished Professor, since 07/2013
FRIB Experimental Systems Division, MSU, Director, since 06/2009
Michigan State University, Professor, 2000-2013
Ludwig Maximilians University, Munich, Germany, Professor, 1999-2000
ISOLDE, CERN, Geneva, Switzerland, Phys. Group Leader, 1995-1999
GSI, Darmstadt, Germany, Research Position, 1995-1995
CERN, Geneva, Switzerland, CERN Fellowship, 1987-1989
Johannes Gutenberg University, Mainz, Germany, Research Position, 1989-1995

Academic Honors

GSI Exotic Nuclei Community Membership Award 2010
IUPAP Senior Scientist Medal in Fundamental Metrology (together with H.-J. Kluge, GSI), 2008: "For the innovation of the Penning trap mass spectrometry technique for short-lived isotopes and developing the highest precision in on-line mass measurements"
Fellow of the American Physical Society, 2006: "For his seminal contribution to the development of Penning traps for short-lived radioactive isotopes and for high-precision mass measurements of these isotopes".
Mattauch-Herzog-Award of the "Arbeitsgemeinschaft Massenspektrometrie" (German Society of Mass Spectrometry), 1991

Publications (> 200 publications. H-index: >50. Citation without self-citations: >3300. Average citation per article: >24). Selected recent examples:

1. Precision mass measurement of lightweight self-conjugate nucleus ^{80}Zr , A. Hamaker, E. Leistenschneider, R. Jain, G. Bollen, S. A. Giuliani, K. Lund, W. Nazarewicz, L. Neufcourt, C. R. Nicoloff, D. Puentes, R. Ringle, C. S. Sumithrarachchi & I. T. Yandow. *Nature Physics* 17, p 1408–1412 (2021)
2. Precision Mass Measurements of Neutron-Rich Scandium Isotopes Refine the Evolution of $N = 32$ and $N = 34$ Shell Closures, E. Leistenschneider, E. Dunling, G. Bollen, B. A. Brown, J. Dilling, A. Hamaker, J. D. Holt, A. Jacobs, A. A. Kwiakowski, T. Miyagi, W. S. Porter, D. Puentes, M. Redshaw, M. P. Reiter, R. Ringle, R. Sandler, C. S. Sumithrarachchi, A. A. Valverde, and I. T. Yandow (The LEBIT Collaboration and the TITAN Collaboration). *Phys. Rev. Lett.* 126, 042501 (2021)
3. High-Precision Mass Measurement of ^{56}Cu and the Redirection of the rp-Process Flow, A. A. Valverde, M. Brodeur, G. Bollen, M. Eibach, K. Gulyuz, A. Hamaker, C. Izzo, W.-J. Ong, D. Puentes, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C. S. Sumithrarachchi, J. Surbrook, A. C. C. Villari, and I. T. Yandow, *Phys. Rev. Lett.* 120, 032701 (2018)
4. Precise determination of the Cd^{113} fourth-forbidden non-unique β -decay Q value, N. D. Gamage, G. Bollen, M. Eibach, K. Gulyuz, C. Izzo, R. M. E. B. Kandedgedara, M. Redshaw, R. Ringle, R. Sandler, and A. A. Valverde. *Phys. Rev. C* 94, 025505
5. Isobaric beam purification for high precision Penning trap mass spectrometry of radioactive isotope beams with SWIFT, A.A. Kwiakowski, G. Bollen, M. Redshaw, R. Ringle, S. Schwarz, *Int. J. Mass Spectrometry* 379 (2015) 9
6. High Precision Determination of the β Decay QEC Value of C-11 and Implications on the Tests of the Standard Model, K. Gulyuz, G. Bollen, M. Brodeur, R. A. Bryce, K. Cooper, M. Eibach, C. Izzo, E. Kwan, K. Manukyan, D. J. Morrissey, O. Naviliat-Cuncic, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C. S. Sumithrarachchi, A. A. Valverde, and A. C. C. Villari, *Phys. Rev. Lett.* 116, 012501
7. The LEBIT ion cooler and buncher, S. Schwarz, G. Bollen, R. Ringle, J. Savory d, P. Schury. *Nucl. Instrum & Methods in Phys. Research A* 816 (2016) 131
8. First Direct Determination of the Superallowed β -Decay QEC Value for ^{14}O : A. A. Valverde, G. Bollen, M. Brodeur, R. A. Bryce, K. Cooper, M. Eibach, K. Gulyuz, C. Izzo, D. J. Morrissey, M. Redshaw, R. Ringle, R. Sandler, S. Schwarz, C. S. Sumithrarachchi, and A. C. C. Villari, *Physical Review Letters* 114 (2015) p.232502
9. First charge breeding of a rare-isotope beam with the electron-beam ion trap of the ReA post-accelerator at the National Superconducting Cyclotron Laboratory, A. Lapierre, S. Schwarz, T. M. Baumann, K. Cooper, K. Kittimanapun, A. J. Rodriguez, C. Sumithrarachchi, S. J. Williams, W. Wittmer, D. Leitner and G. Bollen, *Rev. Sci. Instrum.* 85, 02B701 (2014)
10. Design of the Advanced Rare Isotope Separator ARIS at FRIB, M. Hausmann, A.M. Aaron, A.M. Amthor, M. Avilov, L. Bandura, R. Bennett, G. Bollen, T. Borden, T.W. Burgess, S.S. Chouhan, V.B. Graves, W. Mittig, D.J. Morrissey, F. Pellemoine, M. Portillo, R.M. Ronningen, M. Schein, B.M. Sherrill, A. Zeller, *Nuclear Instruments and Methods in Physics Research Section B* 317 (2013), 349–353