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Mr. Richard Abram Baartman

Correspondence language: English

Contact Information

The primary information is denoted by (*)

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Mr. Richard Baartman

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes

Degrees

- 1981/5 Master's Thesis, Physics, Simon Fraser University
Supervisors: John Cochran, 1975/9 - 1979/12
- 1975/5 Bachelor's Honours, Mathematical Physics, Simon Fraser University

Recognitions

- 2011/1 Outstanding Referee
American Physical Society
Citation
Award for outstanding performance in refereeing scientific papers
- 2009/11 Fellow
American Physical Society
Honor
For significant contributions to the theory and elucidation of collective instabilities and higher order aberrations in particle accelerators and beamlines.

User Profile

Research Specialization Keywords: dynamics fields
 Research Disciplines: Physics
 Areas of Research: Mechanical and Physical Processes
 Fields of Application: Foundations and Knowledge Acquisition

Employment

- 1988/4 Head, Beam Physics
Accelerator Division, TRIUMF
Full-time, Professor
Tenure Status: Tenure
- 1980/1 Research Scientist
TRIUMF
Design and develop charged particle accelerators and transport systems for scientific research and medical applications

Research Funding History

Awarded [n=1]

2011/4 - 2014/3
Principal Applicant Cyclotron Physics, Grant

Funding Sources:

2011/4 - 2014/3 Natural Sciences and Engineering Research Council of Canada (NSERC)
Total Funding - 45,000
Portion of Funding Received - 45,000
Funding Competitive?: Yes

Event Administration

2011-10-01 - Scientific Program Committee Chair, 2013 International Cyclotron Conference,
2013-09-20 Conference, 2013-09-15 - 2013-09-20

2008-10-24 - Scientific Program Committee member, Particle Accelerator Conference, Conference,
2009-06-24 2009-05-19 - 2009-05-23

Editorial Activities

2006/1 - 2009/12 Editorial Board member, Physical Review Special Topics Accelerators and Beams, Journal

International Collaboration Activities

2013-03-01 Reviewer United States
Machine Advisory Committee. This is a standing committee to review, annually the operation and future expansion at Fermilab.

2014-02-12 - design study, Switzerland
2014-02-15 Future Circular Collider Design Study, CERN

2012-03-06 - Reviewer, United States
2012-03-07 Review of the Project X Injector Experiment.

2011-06-06 - Reviewer, United States
2011-06-09 Institutional Review of Fermilab. Assess the merit, effectiveness, and impact of the program at Fermilab and the laboratory's contribution to the national program.

Committee Memberships

2009/1 - 2015/1 Committee Member, International Collaboration on Future Accelerators, Beam Dynamics Panel, ICFA, Beam Dynamics Panel

Presentations

1. L.Merminga, F.Ames, P.Bricault, Y.Bylinski, YCChao, R.Dawson, D.Kaltchev, S.Koscielniak, R.Laxdal. (2015). Ariel: Triumf's advanced rare isotope laboratory. International Particle Accelerator Conference, San Sebastian, Spain
Main Audience: Researcher
Invited?: Yes, Keynote?: No

2. (2013). Optimal 3D Quadrupoles Shapes. North American Particle Accelerator Conference, Pasadena, United States
Main Audience: Researcher
Invited?: Yes, Keynote?: No
3. (2013). Review of space charge effects in cyclotrons. International Conference on Cyclotrons and their Applications, Vancouver, Canada
Main Audience: Researcher
Invited?: Yes, Keynote?: No

Publications

Journal Articles

1. T Kurtukian-Nieto, R Baartman, B Blank, T Chiron, C Davids, F Delalee, M Duval, S El Abbeir, A Fournier, D Lunney, F Méot, L Serani, M-H Stodel, F Varenne, H Weick. (2013). SPIRAL2/DESIR high resolution mass separator. Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms. 317: 284-289.
Published
Refereed?: Yes, Open Access?: No
2. Richard Baartman. (2012). Quadrupole shapes. Phys Rev Special Topics Accelerators and Beams. 15: 074002–074011.
Published
Refereed?: Yes, Open Access?: Yes
3. F Ames, R Baartman, P Bricault, K Jayamanna, T Lamy, M McDonald. (2010). Charge state breeding for the acceleration of radioactive ions at TRIUMF. Review of Scientific Instruments. 81(2)
Published
Refereed?: Yes, Open Access?: No

Book Chapters

1. Richard Baartman. (2013). ISAC LEBT. Jens Dilling, Reiner Krücken, Lia Merminga. ISAC and ARIEL: The TRIUMF Radioactive Beam Facilities and the Scientific Program. : 69-77.
Published, Springer
Refereed?: Yes
2. M. Marchetto, R. A. Baartman, R. E. Laxdal. (2013). ARIEL front end. Jens Dilling, Reiner Krücken, Lia Merminga. ISAC and ARIEL: The TRIUMF Radioactive Beam Facilities and the Scientific Program. : 275-282.
Published, Springer
Refereed?: Yes
3. F. Ames, R. Baartman, P. Bricault, K. Jayamanna. (2013). Charge state breeding of radioactive isotopes for ISAC. Jens Dilling, Reiner Krücken, Lia Merminga. ISAC and ARIEL: The TRIUMF Radioactive Beam Facilities and the Scientific Program. : 63-67.
Published, Springer
Refereed?: Yes
4. Richard A Baartman, Robert E Laxdal, George H Mackenzie, Yi-Nong Rao. (2009). Design and Application of Cyclotrons. Reinhard Stock. Encyclopedia of Applied High Energy and Particle Physics. : 451-466.
Published, Wiley-VCH
Refereed?: Yes

Conference Publications

1. R.E. Laxdal, F. Ames, R.A. Baartman, I.V. Bylinskii, Y.-C. Chao, D. Dale, K. Fong, E.R. Guetre, P. Kolb, S.R. Koscielniak, A. Koveshnikov, M.P. Lavery, Y. Ma, M. Marchetto, L. Merminga, A.K. Mitra, N. Muller, R.R. Nagimov, T. Planche, W.R. Rawnsley, V.A. Verzilov, Z.Y. Yao, Q. Zheng, V. Zvyagintsev [TRIUMF, Canada's National Laboratory for Particle and Nuclear Physics, Vancouver, Canada]. (2015). Status of Superconducting Electron Linac Driver for Rare Ion Beam Production at TRIUMF. LINAC2014, geneva, Switzerland, 2014-08-31
Paper
Published
Refereed?: No, Invited?: Yes
2. A. Laxdal, F. Ames, R.A. Baartman, W.R. Rawnsley, A. Sen, V.A. Verzilov, G. Waters. (2015). Allison Scanner Emittance Diagnostic Development at TRIUMF. LINAC2014, geneva, Switzerland, 2014-08-31
Paper
Published
Refereed?: No, Invited?: No
3. R. Baartman. (2014). Space Charge Limit in Separated Turn Cyclotrons. Cyclotrons2013, vancouver, Canada, 2013-09-16
Paper
Published
Refereed?: No, Invited?: Yes
4. T. Planche, R.A. Baartman, Y.-N. Rao. (2014). Measurement of Turn Structure in the Central Region of TRIUMF Cyclotron. Cyclotrons2013, vancouver, Canada, 2013-09-16
Paper
Published
Refereed?: No, Invited?: No
5. Y.-N. Rao, R.A. Baartman, I.V. Bylinskii, V.A. Verzilov. (2014). TRIUMF Extraction Foil Developments and Contamination Reduction. Cyclotrons2013, vancouver, Canada, 2013-09-16
Paper
Published
Refereed?: No, Invited?: No
6. T. Planche, R.A. Baartman, Y.-N. Rao. (2014). Improvement of the Current Stability from the TRIUMF Cyclotron. Cyclotrons2013, vancouver, Canada, 2013-09-16
Paper
Published
Refereed?: No, Invited?: No
7. R.A. Baartman. (2013). Optimal 3D Quadrupoles Shapes. NA-PAC13 (North American Particle Accelerator Conf.), pasadena, United States, 2013-09-29
Paper
Published
Refereed?: No, Invited?: Yes
8. J. Borburgh, B. Balhan, W. Bartmann, T. Fowler, L. Sermeus, G. Vanbavinckhove [CERN, Geneva, Switzerland] R.A. Baartman [TRIUMF, Vancouver, Canada] D. Barna [University of Tokyo, Tokyo, Japan] V. Pricop [Transilvania University of Brasov, Brasov, Romania] . (2013). Concept for Elena Extraction and Beam Transfer Elements. 4th International Particle Accelerator Conference, Shanghai, , 2013-05-12
Paper
Published
Refereed?: No, Invited?: No

9. G. Vanbavinckhove, W. Bartmann, F. Butin, O. Choisset [CERN, Geneva, Switzerland] R.A. Baartman [TRIUMF, Vancouver, Canada] D. Barna, H. Yamada [University of Tokyo, Tokyo, Japan]. (2013). Geometry and Optics of the Electrostatic ELENA Transfer Lines. 4th International Particle Accelerator Conference, Shanghai, , 2013-05-12
Paper
Published
Refereed?: No, Invited?: No
10. S.R. Koscielniak, F. Ames, R.A. Baartman, I.V. Bylinskii, Y.-C. Chao, D. Dale, R.J. Dawson, E.R. Guetre, N. Khan, A. Kovesnikov, A. Laxdal, R.E. Laxdal, F. Mammarella, M. Marchetto, L. Merminga, A.K. Mitra, T. Planche, Y.-N. Rao, A. Sitnikov, V.A. Verzilov, D. Yosifov, V. Zvyagintsev [TRIUMF, Vancouver, Canada] D. Karlen, R.R. Langstaff [Victoria University, Victoria, B.C., Canada]. (2013). ARIEL Superconducting Electron Linac. LINAC2012, Tel Aviv, Israel, 2012-09-09
Paper
Published
Refereed?: No, Invited?: Yes
11. T. Planche, R.A. Baartman, Y.-N. Rao. (2012). Correction of the $n=3/2$ Resonance in TRIUMF Cyclotron. IPAC 2012, New Orleans, United States, 2012-05-20
Paper
Published
Refereed?: No, Invited?: No
12. R. Baartman. (2012). Quadrupole Shapes. IPAC 2012, New Orleans, United States, 2012-05-20
Paper
Published
Refereed?: No, Invited?: No
13. S.R. Koscielniak, F. Ames, R.A. Baartman, I.V. Bylinskii, Y.-C. Chao, D. Dale, R.J. Dawson, A. Kovesnikov, A. Laxdal, R.E. Laxdal, F. Mammarella, L. Merminga, A.K. Mitra, Y.-N. Rao, V.A. Verzilov, D. Yosifov, V. Zvyagintsev. (2012). Electron Linac Photo-fission Driver for the Rare Isotope Program at TRIUMF. 2012 IPAC, New Orleans, United States, 2012-05-20
Paper
Published
Refereed?: No, Invited?: No
14. A. Chakrabarti, S. Dechoudhury, V. Naik [VECC, Kolkata, India] F. Ames, R.A. Baartman, Y.-C. Chao, R.E. Laxdal, M. Marchetto, L. Merminga, F. Yan [TRIUMF, Vancouver, Canada] G. Goh [SFU, Burnaby, BC, Canada]. (2012). Beam Dynamics Simulation and Optimization for 10 MeV Superconducting e-Linac Injector for VECC-RIB Facility. LINAC2012, Tel Aviv, Israel, 2012-09-09
Paper
Published
Refereed?: No, Invited?: No
15. C.D. Beard, F. Ames, S. Austen, R.A. Baartman, Y.-C. Chao, K. Fong, C. Gong, N. Khan, S.R. Koscielniak, A. Laxdal, R.E. Laxdal, C.D.P. Levy, D. Louie, J. Lu, L. Merminga, A.K. Mitra, D. Rowbotham, P. Vincent, D. Yosifov [TRIUMF, Canada's National Laboratory for Particle and Nuclear Physics, Vancouver, Canada] C.K. Sinclair [CLASSE, Ithaca, New York, USA]. (2011). Conceptual Design for the ARIEL 300 keV Electron Gun. PAC11, new york, United States, 2011-03-28
Paper
Published
Refereed?: No, Invited?: No
16. I.V. Bylinskii, R.A. Baartman, F.W. Bach, J.F. Cessford, G. Dutto, Y.-N. Rao, L.W. Root, R. Ruegg. (2011). TRIUMF Cyclotron Beam Quality Improvement. PAC2011, new york, United States, 2011-03-28
Paper
Published
Refereed?: No, Invited?: No

17. R. Baartman. (2011). Bunch Dynamics through Accelerator Column. IPAC 2011, san sebastian, Spain, 2011-09-04
Paper
Published
Refereed?: No, Invited?: No
18. D. Kaltchev, R.A. Baartman, Y.-C. Chao, P. Kolb, S.R. Koscielniak, L. Merminga, A.K. Mitra, V. Zvyagintsev. (2011). Studies of Transverse Single-pass Beam Breakup in E-Linac. IPAC 2011, san sebastian, Spain, 2011-09-04
Paper
Published
Refereed?: No, Invited?: No
19. Y.-N. Rao, R.A. Baartman. (2011). Transverse Phase Space Tomography in TRIUMF Injection Beamline. IPAC 2011, san sebastian, Spain, 2011-09-04
Paper
Published
Refereed?: No, Invited?: No
20. Y.-N. Rao, R.A. Baartman. (2010). Maximum-Entropy-Based Tomographic Reconstruction of Beam Density Distribution. PAC09, vancouver, Canada, 2009-05-04
Paper
Published
Refereed?: No, Invited?: No
21. R.A. Baartman. (2010). Cyclotron Matching Injection Optics Optimization. PAC09 23rd Particle Accelerator Conference, vancouver, Canada, 2009-05-04
Paper
Published
Refereed?: No, Invited?: No