

Charles R. Meitzler, Ph.D.
Associate Professor
Physics
Arts and Sciences

Degrees Earned

Degree, Major, (minor – optional), Institution, Year

Ph.D., Experimental Nuclear Physics ,Rutgers, The State University of New Jersey. 1984

B.Sc., Pennsylvania State University, 1979

Professional Licensure and Certifications

None

Peer-Review Publications and Artistic Performances/Exhibitions

Articles

1. J.G. Alessi, B. Devito, A. Hershcovitch, A. Kponous, and C.R. Meitzler, "BNL intense polarized h- source progress," *Rev. Sci. Instrum.* 61 (1990) 403.
2. A. Kponou, A. Hershcovitch, J.G. Alessi, B. DeVito, and C.R. Meitzler, "Recent Developments in the BNL Intense Polarized H- Source Program," AIP Conf Proc. Series 210 (1990)
3. A.I. Hershcovitch, A.E. Kponou, C.R. Meitzler, and T.O. Niinikoski, "A superconducting solenoid lens for spin selection and focusing of hydrogen atoms," *Rev. Sci. Instrum.* 61 (1990) 385.
4. C.R. Meitzler, "Magnetic Field of a Toroidal Volume H- Source," AIP Conf Proc. Series 210 (1990) 298.
5. C.R. Meitzler, P. Datte, F.R. Huson, R. Kazimi, C. Kronke, S. Machida, W. MacKay, S. Ohnuma, D. Raparia, D. Sun, P. Tompkins, and J. Zeigler, " Test of a Compact 750 keV H- Preinjector," *AIP Conf. Proc. Series* 210 (1990) 690.
6. A.M. Larsson, and C.R. Meitzler, "Performance of a BNL-type H- Ion Source with Circular Permanent Magnet Cusps," AIP Conference Proceeding Series, Sixth International Symposium on the Production and Neutralization of Negative Ions and Beams (Brookhaven National Laboratory 1992) *AIP Conf. Proc. Series* 53 (1994) 441.
7. "A small 1 MeV electron accelerator for measuring heavy metal concentrations in smokestack gases," A. Reppond, M. Ambrosia, B.C. Hansen, C.R. Meitzler, D.P. Redden, and D.A. Swenson. Accepted for publication in 1998 by the IEEE. This should appear in a special issue of their Transactions of Nuclear Science.
8. "Detection of Heavy Metal Pollution using an External 1 MeV Electron Beam," J.J. Halmari, C.R. Meitzler , T. Ming, D.P. Redden, W.J. Ross, as part of the Proceedings of the Symposium on the Applications Small Accelerators in Research and Industry, University of North Texas, Denton, TX

Books

1. *Physics 115 Laboratory Manual*, R. Palma, C.R. Meitzler, H. Hall, B. Friedman, G. Liang, R. Isham, P. McDonald, and D. Donnelly, (RonJon Publishing, Denton, TX, 1995.) Published with ISBN 1-56870-196-9
2. *Physics 118 Laboratory Manual*, Rex Isham and Charles R. Meitzler (RonJon Publishing, Denton, TX, 1996) I am presently reviewing the proofs for this manual which were delivered to me by RonJon Publishing. This book is scheduled to be published as ISBN 1-56870-235-3 in August, 1996.
3. *Radiation Safety Policy, Radioactive Sources, SHSU Physics Dept.*" This document is the official radiation safety policy of the department. It has been submitted to the Bureau of Radiation, Dept. of Health in Austin as part of our license renewal application. 1998
4. "*Radiation Safety Policy, Electron Linac Laboratory, SHSU Physics Dept.*," This document will be the official radiation safety policy of the Electron Linac Laboratory when it is operational. Contains the policies and procedures related only to the Linac. 1998

Chapters

NONE

Proceedings

1. C.R. Meitzler, P. Datte, F.R. Huson, and P. Tompkins, "Progress on the TAC Ion Source and LBET," Proceedings of the 1990 Linear Accelerator Conference, (Albuquerque, 9-14 September 1990) Los Alamos Report LA-12004C, p. 710.
2. J. Culver, K.J. Antes, F.R. Huson, A. Larsson, C. R. Meitzler, and L. Xiu, "Progress in H- Ion Source Development at TAC," Proceedings of the 1991 Particle Accelerator Conference, (San Francisco, 6-9 May 1991) IEEE 91CH3038-7 Particle Accelerator Conference Proceedings (1991) 2008.
3. R. Kazimi, F.R. Huson, W.W. MacKay, and C.R. Meitzler, "Operation of a 473 MHz Four-Rod Cavity RFQ," Proceedings of the 1992 Linear Accelerator Conference, AECL-10728 (1992) 317.
4. K.J. Antes, A.M. Larsson, and C.R. Meitzler, "A Volume Ions Source with Pulsed Magnetic Field," Proceedings of the 3rd European Particle Accelerator Conference (Berlin 24-29 March 1992) (Editions Frontiere, Gif-sur-Yvette, 1993) 1008.
5. L. Xiu, L. Dong, S. Ohnuma, and C.R. Meitzler, "A New Design of Helical Electrostatic Quadrupole and Its Quasi-Octupole Mode of Operation," Proceedings of the 3rd European Particle Accelerator Conference (Berlin 24-29 March 1992) (Editions Frontiere, Gif-sur-Yvette, 1993) 1533.
6. L Xiu, S. Ohnuma, K. Wang, C.R. Meitzler, and Y. Xu, "Test of the Transport Properties of a Helical Electrostatic Quadrupole and Quasi-Octupole," Proceedings of the 1993 US Particle Accelerator Conference (Washington DC, May 17-20, 1993) IEEE 93CH3279-7 Particle Accelerator Conference Proceedings (1993) 3148.
7. Yu Wu, Peter McIntyre, Charles R. Meitzler, and Gan Liang, "A New Design Approach for MRS Superconducting Magnet," Magnetic Resonance Society Proceedings, San Francisco, September 1994.
8. Peter McIntyre, Yu Wu, Gan Liang, and Charlie R. Meitzler, "Study of Nb3Sn Superconducting Joints," Proceedings of the 1994 Applied Superconductivity Conference, Boston, October 1994.

9. Gan Liang, Charles R. Meitzler, Tommy Binford, Larry Crow, John Ziegler, Tom Mann and Jim Hunter, "Development of Superconducting Joints for NMR Superconducting Magnet Application," IEEE Transactions on Magnetics, MT-15 Conference, 1998.

Artistic Performances

NONE

Artistic Exhibitions

NONE

Research Monographs and Technical Reports

1. C.R. Meitzler, **Technical Note 99-1**, "Design of a Cartridge for Studying the Gas Flow in a Gun's Muzzle Region," March 5, 1999. Available on the World Wide Web at http://www.shsu.edu/~phy_crm/technotes/tn99_1.pdf.
2. C.R. Meitzler, **Technical Note 01-1**, "Feasibility Study of a Liquid Nitrogen Temperature Accelerating Cavity for an Isochronous Cyclotron, 27 August, 2001 Available in PDF format on the World Wide Web at http://158.135.202.22/technotes/tn01_1.pdf

Funded External Grants

1. "SSC Linac Development at HARC", subcontract from Superconducting Super Collider (DOE) grant to the Houston Advanced Research project, 1989 – 1993 , ~2.3 M\$ for entire project
2. Ion Source and Low-Energy Beam Transport, 1991-1993, Texas National Research Laboratory Commission, ~75 k\$
3. Electron Linac for Detection of Metals in Smokestack Gases, 1997-1999, ~80 k\$

Peer-Review Presentations/Posters

1. D.P. Redden et al., including C.R. Meitzler, "Detection of metals in a smokestack using an external electron beam," International Conference of Physics Students, Coimbra, Portugal, August 1998.
 2. D.P. Redden, J. Halmari, B.C. Hansen, C.R. Meitzler, and A.G. Reppond, "Development of a Pollution Monitor Using the PIXE Technique, "Winter Meeting of the American Association of Physics Teachers, New Orleans, LA, December 1998.
 3. E.D. Waltmon, B.C. Hansen, and C.R. Meitzler, "Monte Carlo simulation of the x-ray signature produced by a 1 MeV electron beam passing through smokestack flue gases, International Conference on the Application of Accelerators in Research and Industry, November 1998.
 4. Using a small 1 MeV electron accelerator to measure heavy metal concentrations in smokestacks," Meeting of the Texas Section of the American Physical Society, El Paso, October 1998.
 5. W. J. Ross et al, including C.R. Meitzler, "Quantification of the low-level radiation effects chemically hazardous materials," Meeting of the Texas Section of the American Physical Society, El Paso, October 1998.
- P. McIntyre et al, including C.R. Meitzler, "The Thorium Cycle Reactor - A new energy source," Fall Meeting of the Texas Section of the American Physical Society,

Work or Professional Experiences

1989 – present, faculty, Sam Houston State University

1987 – 1989, Fellow of Accelerator Technology, Brookhaven National Laboratory, AGS Division

1985 – 1987, Staff Physicist, General Ionex Corp.

1984 – Postdoctoral Research Associate, Ohio University

Honors and Awards

NONE

Other Competencies