

Scott L. Nutter

Refereed Publications

1. "The Cosmic Ray Energetics and Mass (CREAM) timing charge detector." H.S. Ahn et al. (CREAM Collaboration), *Nucl. Inst. & Meth. A* 602, 525-536 (2009).
2. "Approaching the Spectral Knee in High Energy Cosmic Rays with CREAM." E. S. Seo et al., *Journal of the Physical Society of Japan, Suppl. A*, 78, 63-67, 2009.
3. "Measurements of cosmic-ray secondary nuclei at high energies with the first flight of the CREAM balloon-borne experiment." H.S. Ahn et al. (CREAM collaboration), *Astroparticle Physics*, Vol. 30, Issue 3, pp. 133-141, 2008.
4. "Preliminary results from the second flight of CREAM." P.S. Marrocchesi et al., *Advances in Space Research*, Vol. 41, Issue 12, pp. 2002-2009, 2008.
5. "CREAM: 70 days of flight from 2 launches in Antarctica." E. S. Seo et al., *Advances in Space Research*, 42, 1656-1663, 2008.
6. "First measurements of cosmic-ray nuclei at high energy with CREAM." S. Wakely et al., *Advances in Space Research*, Vol. 42, Issue 3, pp. 403-408, 2008.
7. "Design and performance in the first flight of the transition radiation detector and charge detector of the CREAM balloon instrument." S. Coutu et al., *Nucl. Inst. Meth. A*, 572, 485-487, 2007
8. "Silicon charge detector for the CREAM experiment." I.H. Park et al., *Nucl. Instrum. Methods A*, 570, 286-291 2007.
9. "The Cosmic Ray Energetics And Mass (CREAM) instrument." H. S. Ahn et al., *Nucl. Instrum. Methods A*, 579, 1034-1053, 2007.
10. "Silicon charge detector for the CREAM experiment." I.H. Park et al., *Nucl. Instrum. Methods A*, 570, 286-291 2007.
11. "Approaching the Knee with Direct Measurements." E. S. Seo et al., *Nuclear Physics B - Proc. Suppl.*, 175-176C, 155-161, 2007
12. "Performance of CREAM Calorimeter: Results of Beam Tests." H. S. Ahn et al., *Nuclear Physics B(Proc. Suppl.)*, 150, 272-275, 2006.
13. "The First Flight of the CREAM Silicon Charge Detector." N. H. Park, H.S. Ahn, O. Ganel, K.C. Kim, M.H. Lee, L. Lutz, A. Malinin, E.S. Seo, R. Sina, J. Wu, Y.S.Yoon, S.Y. Zinn, P. Boyle, S. Swordy, S. Wakely, N.B. Conklin, S. Coutu, S.I. Mognet, P. Allison, J.J. Beatty, J.T. Childers, M.A. Duvernois, M.G. Bagliesi, G. Bigongiari, P. Maestro, P.S. Marrocchesi, R. Zei, J.H. Han, H.J. Hyun, J. A. Jeon, J. K. Lee, S.W. Nam, I.H. Park, J. Yang, S. Nutter, S. Minnick, H. Park. *J. of Korean Physical Society*. 49, No. 2, 815-818, 2006.
14. "CREAM - Pushing the High Energy Frontier of Directly Measured Cosmic Rays." O. Ganel, H.S. Ahn, K.C. Kim, M.H. Lee, L. Lutz, A. Malinin, E.S. Seo, R. Sina, J. Wu, Y.S.Yoon, S.Y. Zinn, P. Boyle, S. Swordy, S. Wakely, N.B. Conklin, S. Coutu, S.I. Mognet, P. Allison, J.J. Beatty, J.T. Childers, M.A. Duvernois, M.G. Bagliesi, G. Bigongiari, P. Maestro, P.S. Marrocchesi, R. Zei, J.H. Han, H.J. Hyun, J. A. Jeon, J. K. Lee, S.W. Nam, I.H. Park, N.H. Park, J. Yang, S. Nutter, S. Minnick, H. Park. *Czech. J. Phys.* 56, A301-A312, 2006
15. "New measurement of the altitude dependence of the atmospheric muon intensity" J.J. Beatty et al. *Phys. Rev. D* 70, 092005 (2004).
16. "Cosmic-ray energetics and mass (CREAM) balloon project." E.S. Seo, H.S. Ahn, J.J. Beatty, S. Coutu, M.J. Choi, M.A. Duvernois, O. Ganel, T.G. Kang, K.C. Kim, M.H. Lee, L. Lutz, P.S. Marrocchesi, S. Minnick, K.W. Min, S. Nutter, H. Park, I.H. Park, E. Schindhelm, R. Sina, S. Swordy, J. Wu, J. Yang, *Advances in Space Research*, Volume 33, Issue 10, 1777-1785, 2004
17. "New measurement of the cosmic-ray positron fraction from 5 to 15 GeV." J.J. Beatty et al., *Phys. Rev. Lett.* 93, 241102 (2004).

18. "Cosmic Ray Energetics and Mass (CREAM) Balloon Experiment," E. S. Seo, H. S. Ahn, S. Beach, J.J. Beatty, S. Coutu, M.A. DuVernois, O. Ganel, Y. J. Han, H. J. Kim, S. K. Kim, M. H. Lee, L. Lutz, S. Nutter, S. Swordy, and J.Z. Wang, *Advances in Space Research*, 30(5), 1263-1272, 2002.
19. "Measurement of the cosmic ray antiproton to proton abundance ratio between 4 and 50 GeV" (A.S. Beach, J.J. Beatty, A. Bhattacharyya, C. Bower, S. Coutu, M.A. DuVernois, A.W. Labrador, S. McKee, S.A. Minnick, D. Muller, J. Musser, S. Nutter, M. Schubnell, S. Swordy, G. Tarle, and A. Tomasch) *Phys. Rev. Lett.* **87** 271101 (2001).
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21. "Energy Spectra, Altitude Profiles and Charge Ratios of Atmospheric Muons" (S. Coutu, J.J. Beatty, M.A. DuVernois, S.W. Barwick, E. Schneider, A. Bhattacharyya, C.R. Bower, J.A. Musser, A. Labrador, D. Müller, S.P. Swordy, E. Torbet, C.J. Chaput, S. McKee, G. Tarle, A.D. Tomasch, S.L. Nutter and G.A. de Nolfo). *Phys. Rev. D*. **62**, 032001 (2000).
22. "A Measurement of the Isotopic Composition of Cosmic Ray Helium, Lithium, Beryllium, and Boron up to 1700MeV/amu." (S.P. Ahlen, N.R. Greene, D. Loomba, J.W. Mitchell, C.R. Bower, R.M. Heinz, S.L. Mufson, J. Musser, J.J. Pitts, G.M. Spiczak, J. Clem, T.G. Guzik, M. Lijowski, J.P. Wefel, S. McKee, S. Nutter, A. Tomasch, J.J. Beatty, D.J. Ficenc, and S. Tobias) *Astrophysical Journal*. **534**, p.757 (2000).
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25. "Cosmic ray reentrant electron albedo: High-Energy Antimatter Telescope balloon measurements from Fort Sumner, New Mexico." (S.W. Barwick, J.J. Beatty, C.R. Bower, C.J. Chaput, S. Coutu, G.A. de Nolfo, M.A. DuVernois, D. Ficenc, J. Knapp, D.M. Lowder, S. McKee, D. Muller, J.A. Musser, S.L. Nutter, E. Schneider, S.P. Swordy, G. Tarle, A.D. Tomasch and E. Torbet) *Journal of Geophysical Research* **103**, 4817 (1998).
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30. "Study of the Primary Cosmic Ray Composition Around the Knee of the Energy Spectrum." (The MACRO and EAS-TOP Collaborations) *Phys. Lett. B* **337** (1994).

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Presentations

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“SMILI: Superconducting Magnet Instrument for Light Isotopes: Design and Measurements.” California Institute of Technology Space Sciences seminar, May 1992.

“A Measurement of the $^3\text{He}/^4\text{He}$ Ratio in the Cosmic Radiation from 500 MeV/amu to 1100 MeV/amu”
At The 22nd International Cosmic Ray Conference, Dublin, Ireland. July, 1991.

Conferences Attended

Kentucky Academy of Sciences Fall 2008 Meeting, November 2008

International Cosmic Ray Conference, Merida Mexico (June 2007)

Kentucky Academy of Sciences Fall 2006 Meeting, November 2006

American Physical Society April Meeting, Dallas, April, 2006.

GEANT4 Tutorial, SLAC, Stanford, California, March, 2006.

Kentucky Academy of Sciences Fall 2005 Meeting, Kentucky, November 2005.

Kentucky Academy of Sciences Fall 2004 Meeting, Murray, Kentucky, November 2004.

Ohio Section of the American Physical Society Spring 2004 Meeting, Athens, Ohio, April 2004.

Kentucky Space Grant Consortium/NASA EPSCoR Conference, Lexington, Kentucky, May 2004.

Northern Kentucky University Education/Arts & Sciences mini-conference "Linking Content and Pedagogy: Strengthening Teacher Education." NKU, May 2004

Kentucky Association of Science Teachers Spring 2004 Meeting, Campbellsville, Kentucky, March 6, 2004.

Kentucky Academy of Sciences Fall 2003 Meeting, Bowling Green, Kentucky, November 2003.

Ohio Section of the American Physical Society Fall 2002 Meeting, October 2002.

Ohio Section of the American Physical Society Fall 2001 Meeting "Novel Techniques in Physics Pedagogy," October 2001.

International Cosmic Ray Conference, Hamburg, Germany, August 2001.

New Mexico Higher Education Assessment Conference, Las Cruces NM, February 2000.

New Mexico Collaboration for Excellence in Teacher Preparation, Albuquerque NM, November 1999.

New Mexico Science Teachers Association Annual meeting, Hobbs, NM, October 1999.

Four Corners Section of the APS Sectional meeting, University of Arizona, Tucson, AZ, October 1999.

4th Annual Mid-South Instructional Technology Conference, Middle Tennessee State University, Murfreesboro, Tennessee, March 28-30, 1999.

2nd Annual Mid-South Instructional Technology Conference, Middle Tennessee State University, Murfreesboro, Tennessee, April 6-8, 1997.

American Association of Higher Education 2nd Annual Teaching and Learning Technology Roundtable Summer Institute, Scottsdale, Arizona, July 12-16, 1996.

Four Corners Section of the APS Sectional meeting, University of New Mexico, Albuquerque, N.M., Spring 1998.

Mini-Conference on Technology & Learning in Large Classrooms. Portland State University , June 25-28, 1998.

National Symposium on Teaching Astronomy to Non-Science Majors. 110th meeting of the Astronomical Society of the Pacific, Albuquerque, NM, June 29-30 1998.

American Association of Higher Education Teaching and Learning Technology Roundtable, Washington DC 1995.

22nd International Cosmic Ray Conference, Dublin, Ireland. July, 1991.