**Douglas R Bergman, PhD -BIOGRAPHICAL SKETCH**

Associate Professor, Department of Physics & Astronomy, University of Utah

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**A. Professional Preparation**

University of Chicago Physics A.B., 1989

Yale University Physics Ph.D., 1997

Rutgers University Physics & Astronomy Postdoctoral Fellow, 1997-2000

**B. Appointments**

2009-present Associate Professor, Physics & Astronomy University of Utah

2005-2009 Assistant Professor, Physics & Astronomy Rutgers University

2004-2005 Research Assistant Professor, Physics & Astronomy Rutgers University

2000-2004 Research Fellow Rutgers University

**C. Publications**

*(i) Most closely related*

1. D.R. Bergman, Y. Tsunesada, J.F. Krizmanic, Y. Omura, “jNICHE: Prototype detectors of a non-imaging Cherenkov array at the TA site,” PoS(ICRC2017)415.
2. D. R. Bergman, J. Krizmanic and Y. Tsunesada, “The NICHE Array: Status and Plans,” Proc. of the 34th ICRC, The Hague, Netherlands, Aug. 2015, PoS(ICRC2015)635.
3. T. Abu-Zayyad *et al*., “The Energy Spectrum of Ultra-High-Energy Cosmic Rays Measured by the Telescope Array FADC Fluorescence Detectors in Monocular Mode,” Astropart. Phys. **48,** 16 (2013). [arXiv/1305.6079]
4. R. U. Abbasi *et al*., “First Observation of the Greissen-Zatsepin-Kuzmin Suppression,” Phys. Rev. Lett. **100**,101101 (**2008)**. [arXiv:astro-ph/0703099]
5. D. R. Bergman and J. W. Belz, “Cosmic rays: the Second Knee and beyond,” J. Phys. G **34**, R359 (2007). [arXiv/0704.3721]

(*ii) Other significant publications*

1. D.R. Bergman and T. Stroman, “Telescope Array measurement of UHECR composition from stereoscopic fluorescence detection,” PoS(ICRC2017)538.
2. R. U. Abbasi *et al*., “Measurement of the proton-air cross section with Telescope Array’s Middle Drum detector and surface array in hybrid mode,” Phys. Rev. D **92**, 032007 (2015). [arXiv:1505.01860]
3. R. U. Abbasi *et al*., “An upper limit on the electron-neutrino flux from the HiRes detector”, Astrophys. J. **684**,790 (2008). [arXiv:0803.0554]
4. R. U. Abbasi *et al*., “Studies of systematic uncertainties in the estimation of the monocular aperture of the HiRes experiment,” Astropart. Phys. **27**,370 (2007). [arXiv:astro-ph/0607094]
5. R. Appel et al. [E865 Collaboration], “An improved limit on the rate of decay K+ → pi+ mu+ e-,” Phys. Rev. Lett. **85**, 2450 (2000). [arXiv:hep-ex/0005016]

**D. Synergistic Activities**

* 1. Reviewer for a number of journals, including *Astrophysical Journal, Astroparticle Physics, Modern Physics Letters*; reviewer for the National Science Foundation; reviewer forthe textbook *University Physics* by Bauer and Westfall.
  2. Organizer of Helmholz Alliance Astroparticle Physics Workshop on Composition, Karlsruhe, 2015.
  3. Chair of session, UHECR2014, Oct. 2014; IceCube Particle Astrophysics Symposium, May 2013.
  4. Convener of Telescope Array Fluorescence Detector Working Group.
  5. Coach for Science Olympiad (Torrey Pines High School) and Judge for North Jersey Regional Science Fair.

**E. Collaborators & Other Affiliations:**

*nuSpaceSim*: J.F.Krizmanic, Y. Akaiki, L. Anchordoqui, S. Mackovjak, A. Olinto, M.H. Reno, A. Roméro-Wolf, T. Venters, L. Wiencke, S. Wissel.

*POEMMA Collaboration*: J. Adams, M. Christl, I. Jun, J.F. Krizmanic, J. Mitchell, A. Olinto, J. Perkins, F. Stecker, L. Wiencke, R. Young.

*Telescope Array Collaboration*: R.U. Abbasi, M. Abe, T. Abu-Zayyad, M. Allen, R. Anderson, R. Azuma, E. Barcikowski, J.W. Belz, S.A. Blake, R. Cady, M.J. Chae, B.G. Cheon, J. Chiba, M. Chikawa, W.R. Cho, T. Fujii, M. Fukushima, T. Goto, W. Hanlon, Y. Hayashi, N. Hayashida, K. Hibino, K. Honda, D. Ikeda, N. Inoue, T. Ishii, R. Ishimori, H. Ito, D. Ivanov, C.C.H. Jui, K. Kadota, F. Kakimoto, O. Kalashev, K. Kasahara, H. Kawai, S. Kawakami, S. Kawana, K. Kawata, E. Kido, H.B. Kim, J.H. Kim, J.H. Kim, S. Kitamur, Y. Kitamura, V. Kuzmin, Y.J. Kwon, J. Lan, S.I. Lim, J.P. Lundquist, K. Machida, K. Martens, T. Matsuda, T. Matsuyama, J.N. Matthews, M. Minamino, K. Mukai, I. Myers, K. Nagasawa, S. Nagataki, T. Nakamura, T. Nonaka, A. Nozato, S. Ogio, J. Ogura, M. Ohnishi, H. Ohoka, K. Oki, T. Okuda, M. Ono, A. Oshima, S. Ozawa, I.H. Park, M.S. Pshirkov, D.C. Rodriguez, G. Rubtsov, D. Ryu, H. Sagawa, N. Sakurai, A.L. Sampson, L.M. Scott, P.D. Shah, F. Shibata, T. Shibata, H. Shimodaira, B.K. Shin, H.S. Shin, J.D. Smith, P. Sokolsky, R.W. Springer, B.T. Stokes, S.R. Stratton, T.A. Stroman, T. Suzawa, M. Takamura, M. Takeda, R. Takeishi, A. Taketa, M. Takita, Y. Tameda, H. Tanaka, K. Tanaka, M. Tanaka, S.B. Thomas, G.B. Thomson, P. Tinyakov, I. Tkachev, H. Tokuno, T. Tomida, S. Troitsky, Y. Tsunesada, K. Tsutsumi, Y. Uchihori, S. Udo, F. Urban, G. Vasiloff, T. Wong, R. Yamane, H. Yamaoka, K. Yamazaki, J. Yang, K. Yashiro, Y. Yoneda, S. Yoshida, H. Yoshii, R. Zollinger, Z. Zundel.

*High Resolution Fly’s Eye Collaboration*: R.U. Abbasi, T. Abu-Zayyad, M. Al-Seady, M. Allen, J.F. Amman, R.J. Anderson, G. Archbold, K. Belov, J.W. Belz, S.A. Blake, O.A. Brusova, G.W. Burt, C. Cannon, Z. Cao, W. Deng, Y. Fedorova, C.B. Finley, R.C. Gray, W.F. Hanlon, C.M. Hoffman, M.H. Holzscheiter, G. Hughes, P. Hüntemeyer, D. Ivanov, B.F. Jones, C.C.H. Jui, K. Kim, M.A. Kirn, E.C. Loh, J. Liu, J.P. Lundquist, M.M. Maestas, N. Manago, L.J. Marek, K. Martens, J.A.J. Matthews, J.N. Matthews, S.A. Moore, A. O’Neill, C.A. Painter, L. Perera, K. Reil, R. Riehle, M. Roberts, D. Rodriguez, N. Sasaki, S.R. Schnetzer, L.M. Scott, G. Sinnis, J.D. Smith, P. Sokolsky, C. Song, R.W. Springer, B.T. Stokes, S. Stratton, S.B. Thomas, J.R. Thomas, G.B. Thomson, D. Tupa, A. Zech, X. Zhang.

**Graduate Advisor and Postdoctoral Sponsor:** Ph.D. graduate advisor: Professor Michael E. Zeller, Yale University (retired). Postdoctoral fellow: Professor Gordon Thomson, Rutgers University (retired).

**Thesis Advisor and Postgraduate-Scholar Sponsor**

Graduate Students: Sean Stratton (Ph.D. 2012, Rutgers University); Greg Furlich (4th year).

Postdoctoral Fellows: Lauren M. Scott (2005-2010), Rutgers University; Thomas Stroman (2010-2015).