

James M. Russell III
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Education: Ph.D. (Aeronomy), University of Michigan, 1970
MEE, University of Virginia, 1966
BSEE, Virginia Polytechnic Inst. and State Univ., 1962

Specialties: Atmospheric Science, Remote Sensing, and Satellite Data Analysis

Research and Teaching Positions:

- Professor of Atmospheric and Planetary Science, Hampton University (2006 – present)
- Professor of Physics, Hampton University (1996 – 2006)
- Head, Theoretical Studies Branch, NASA LaRC, Atmospheric Sciences Division (1984 - 1996)
- Math Professor, St. Leo College (1987 – 1989)
- Head, Chemistry & Dynamics Branch, Atmospheric Sciences Division, NASA, LaRC (1976 – 1984)
- Visiting Scientist, Special Project, NCAR (summer) (1974)
- Lecturer, Remote Sensing of the Atmosphere, George Washington University (1973)
- Lecturer, Physics, Christopher Newport University (1971 – 1973)
- Research Scientist, Langley Research Center (1970 – 1975)

Related Publications:

Russell III, James M., Scott M. Bailey, Mihaly Horanyi, Larry L. Gordley, David W. Rusch, Mark E. Hervig, Gary E. Thomas, Cora E. Randall, David E. Siskind, Michael H. Stevens, Michael E. Summers, Michael I. Taylor, Christoph R. Englert, Patrick J. Espy, William E. McClintock and Aimee W. Merkel, Aeronomy of Ice in the Mesosphere (AIM): Overview and early science results, *J. Atmos. Solar-Terr. Phys.*, doi:10.1016/j.jastp.2008.08.011.

Gordley, L.L., Mark Hervig, Chad Fish, James Russell III, James Cook, Scott Hanson, Andrew Shumway, Scott Bailey, Greg Paxton, Lance Deaver, Tom Marshall, John Burton, Brian Magill, Chris Brown, Earl Thompson, and John Kemp, The Solar Occultation For Ice Experiment (SOFIE), *J. Atmos. Solar-Terr. Phys.*, doi:10.1016/j.jastp.2008.07.012.

Yang, E.-S., D. M. Cunnold, R. J. Salawitch, M. P. McCormick, J. Russell III, J. M. Zawodny, S. Oltmans, and M. J. Newchurch, Attribution of recovery in lower-stratospheric ozone, *Journal of Geophysical Research*, 111, D16315, doi:10.1029/2005JD006371., 2006.

Mlynczak, Marty, F. Javier Martin-Torres, James Russell, Ken Beaumont, Steven Jacobson, Janet Kozyra, Manuel Lopez-Puertas, Bernd Funke, Christopher Mertens, Larry Gordley, Richard Picard, Jeremy Winick, Peter Wintersteiner, Larry Paxton, The natural thermostat of nitric oxide emission at 5.3 μm in the thermosphere observed during the solar storms of April 2002, *Geophysical Research Letters*, Vol. 30, No. 21, 2100, doi:10.1029/2003GL017693, 2003.

Russell, James M., III, Mingzhao Luo, Ralph J. Cicerone and Lance E. Deaver, Satellite confirmation of the dominance of chlorofluorocarbons in the global stratospheric chlorine budget, *Nature*, Vol. 379, Issue 6565, pp. 526-529, 1996.

Russell, James M. III, Susan Solomon, Larry L. Gordley, Ellis E. Remsberg and Linwood B. Callis, The variability of stratospheric and mesospheric NO₂ in the polar winter night observed by LIMS, *Journal of Geophysical Research*, Vol. 89, No. D5, pp 7267-7275, 1984.

Other Significant Publications:

- Anderson, J. ; Russell, J. M. III ; Solomon, S. ; Deaver, L. E., Halogen Occultation Experiment confirmation of stratospheric chlorine decreases in accordance with the Montreal Protocol *J. Geophys. Res.* Vol. 105 , No. 4 , p. 4483, February 27, 2000.
- Anderson, J., J. M. Russell III, S. Solomon, and L. E. Deaver, HALOE confirmation of stratospheric chlorine decreases in accordance with the Montreal Protocol, In-press *J. Geophys. Res.*, October, 1999.
- Randel, William J., Fei Wu, James M. Russell III and Joe Waters, Space-time patterns of trends in stratospheric constituents derived from UARS measurements, *J. Geophys. Res.*, 104, No. D3, Pages 3711-3727, February 20, 1999.
- Gray, L.J. and J.M. Russell III, Interannual variability of trace gases in the subtropical winter stratosphere. *J. Atmos. Sci.*, 56, 977-993, April 1, 1999.
- Russell, J. M. III, L. L. Gordley, J. H. Park, S. R. Drayson, D. H. Hesketh, R. J. Cicerone, A. F. Tuck, J. E. Frederick, J. E. Harries, and P. J. Crutzen: The Halogen Occultation Experiment, *J. Geophys. Res.*, 98, No. D6, 10,777-10,797, June 20, 1993.
- Russell, James M. III, L. E. Deaver, M. Luo, J. H. Park, L. L. Gordley, A. F. Tuck, G. C. Toon, M. R. Gunson, W. A. Traub, D. G. Johnson, K. W. Jucks, D. G. Murcray, R. Zander, I. Nolt, and C. R. Webster: Validation of Hydrogen Chloride Measurements made by HALOE from the UARS Platform, *J. Geophys. Res.*, Vol. 101, No. D6, pp. 10,151-10,162, April 30, 1996.

Synergistic Activities:

Co-founder of the Hampton University Center for Atmospheric Sciences; established the atmospheric sciences program with Co-Director, Dr. M. Patrick McCormick; developed the atmospheric sciences curriculum at HU as part of the Physics department.

Developed, with CAS Co-Director, the successful proposal for a new department of Atmospheric and Planetary Sciences and the accompanying curriculum. Department established in November 2006.

Participated in course content development for graduate level courses in Remote Sensing and Radiative Transfer at HU.

Member of the NASA Heliophysics Advisory Committee, 2006 – present

Overall Co-Chairman, SPARC International Water Vapor Assessment Study, 1999 – 2000

Collaborators and Other Affiliations:

(i) Collaborators:

Scott Bailey, Virginia Tech; David Siskind, Naval Research Laboratory; Michael Stevens, Naval Research Laboratory; Christoph Englert, Naval Research Laboratory; David Rusch, University of Colorado; Gary Thomas, University of Colorado; Mihaly Horanyi, University of Colorado; Michael Summers, George Mason University; Doran Baker, Utah State University; Larry Gordley and Mark Hervig, Gats-Inc; Hans Mayer, Goddard Space Flight Center; Michael Taylor, Utah State University; Anne Smith, NCAR; Dan Marsh, NCAR; Richard Goldberg and Dean Pesnell, Goddard Space Flight Center; Rolando Garcia, NCAR; Richard Picard and Jeremy Winick, Air Force Research Laboratories; Ellis Remsberg and Martin Mlynczak, Langley Research Center; Sam Yee, Johns Hopkins Applied Physics Laboratory.

(ii) Graduate and Post-Doctoral Advisors:

S. Roland Drayson, University of Michigan, Retired

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor:

One graduate student received the Ph.D. degree - Jon Wrotny, now at the Naval Research Laboratory; one graduate student, Kabba Bah, received the M.S. degree, now at the U. Wisconsin. Currently advising one Ph.D. Graduate student – Ladislav Rezac, at Hampton University.