

Ronald B. Smith

Curriculum Vitae [updated August 2018]

Areas of Interest: Atmospheric Physics and Dynamics, Mountain Meteorology, Applied Mathematics, Remote Sensing, Regional Climates

Birth data: June 15, 1944, Rochester, NY, USA Citizen

Marital Status: Married; wife Sigrid Randers-Pehrson Smith

Education:

1966 Bachelor of Aeronautical Engineering, Rensselaer Polytechnic Institute

1969 Master of Science, Princeton University

1975 Doctor of Philosophy, The Johns Hopkins University

Employment History:

- | | |
|--------------|---|
| 9/68 to 9/71 | Instructor in Aeronautical Engineering
U.S. Naval Academy and Deck Officer at Sea
Active duty in the United States Navy |
| Summer 1973 | Pre-doctoral fellow, Geophysical Fluid Dynamics
Summer Program, Woods Hole Oceanographic Institution |
| Summer 1974 | Post-doctoral fellow, Summer Institute on Meso-Scale Processes
National Center for Atmospheric Research |
| Summer 1975 | Visiting Scientist, NCAR, Boulder, Colorado |
| 9/74 to 5/76 | Visiting Assistant Professor, Department of Astro-Geophysics
University of Colorado, Boulder, Colorado |
| Summer 1977 | Visiting Scientist, Meteorology Section, Research Establishment RISØ
Roskilde, Denmark |
| 9/77 to 6/78 | Visiting Scientist and Lecturer, Fulbright-Hays and NATO Fellow
Institute of Geophysics, University of Oslo, Norway |
| Summer 1979 | Visiting Scientist, Laboratory for Atmospheric Sciences |

NASA Goddard Space Flight Center, Greenbelt, Maryland

Summer 1981 Visiting Scientist, NCAR, Boulder, Colorado

9/76 to 6/79 Assistant Professor, Department of Geology and Geophysics, Yale University

7/79 to 6/86 Associate Professor, Department of Geology and Geophysics, Yale University

1988-present Adjunct Professor of Mechanical Engineering, Yale University

Spring 1995 Visiting Scientist, NCAR, Boulder, Colorado

7/86 - present Professor, Department of Geology and Geophysics, Yale University

7/91 – 6/97 Chairman, Department of Geology and Geophysics

1993-present Director of Yale Center for Earth Observation

2000-present Adjunct Professor, Forestry and Environmental Studies, Yale

Summer 1999 Visiting Scientist, University of Stockholm

Field Experience:

Instructor in Deck Seamanship; summer 1969 on the USS Point Defiance, summer 1970 on the USS Guadalcanal

Oceanographic technician; May-June 1973 on the R/V Trident during the MODE project, May 1974 on the R/V Ridgely Warfield in the Chesapeake Bay, November 1977 on the R/V Polarsirkel on Spitsbergen ice edge studies.

Chief Scientist; winter 1974 on the Penn State instrumented Aerocommander during measurements of Appalachian lee waves

Mission scientist on NCAR Electra, NOAA P-3, and DFVLR Falcon during ALPEX (March, April 1982)

Mission scientist on NCAR Sabreliner during GALE (January-March 1986)

Mission scientist in Taipei Operations Center during TAMEX (May-June 1987)

Private Pilot (F.A.A. Cert. No. 91363161)

Mission Scientist on NCAR Sabreliner during ERICA (Dec 88 to Feb 89)

Mission Scientist on NCAR Electra during HARP (July, August 1991)

Mission Scientist on NCAR Sabreliner during Chemical Layering Project in Edmonton (Jan. 1991)

Mission Scientist during the Cloud Isotope Project in Colorado/Wyoming on the NCAR Sabreliner (Oct. 1992) and on the NCAR Electra (March 1994)

Mission Scientist on the St. Vincent Wake Project (Feb. 1995)

Lecturer/Eco-Tour leader (Baffin Bay 1992, North Cape 1995, Cape Horn 1998, Hudson's Bay 1999, Upper Amazon 2002, Antarctica 2005, Baffin Bay 2008)

Pilot on the Connecticut Boundary Layer Isotope Project (Fall 1997)

Field Surveys of Syria (1996 and 1998); Patagonia (2005), Northern California (2006), Dominica (2007)

Co-Director (with Philippe Bougeault) of the Mesoscale Alpine Programme Special Observing Period;
Fall 1999

Mission Scientist on the NCAR Gulfstream V and the University of Wyoming King Air in Sierra
Nevada Project (Spring 2006)

Lead Scientist on the Wyoming King Air in the Dominica Experiment (Spring 2011)

Co-Principal Investigator and mission scientist on the Deepwave Project in New Zealand (June-July
2014)

Teaching Experience:

Generally in the areas of meteorology, oceanography, fluid mechanics, atmospheric
physics, applied mathematics, mesoscale dynamics, environmental remote sensing.

Recent Teaching: Over the past few years, five courses have been offered: G&G140/201 “The
atmosphere, ocean and environmental change” {available online at [http://oyc.yale.edu/geology-
and-geophysics/gg-140](http://oyc.yale.edu/geology-and-geophysics/gg-140)] with lab G&G141/EVST202, G&G 362/562 “Observing the earth
from space” and G&G536 “Atmosphere waves, convection and vortices”, G&G275 “Renewable
Energy”, Science 30 “Current Topics in Science”.

Awards and Fellowships:

Fulbright-Hays Fellowship (1977)

Editor's Award from the Monthly Weather Review (1985)

Fellow of the American Meteorology Society (2003)

AMS Mountain Meteorology Award (2010)

AMS Jules G. Charney Award (2011)

Harwood F. Byrnes / Richard B. Sewall Teaching Prize (2012)

Boards and Committees:

Chairman of the GARP Mountain Subprogram Panel of the National Research Council
(1980-1988)

Member of the U.S. Committee for the Global Atmospheric Research Program
(1980-1988)

Member of the World Meteorological Organization's Joint Scientific Committee for the
Alpine Experiment (1980-1988)

Member of the AMS Committee on Mountain Meteorology (1982-1986)

Member of the Delegation on Mountain Meteorology to the Peoples Republic of China
(1982)

Member of the UCAR Review Panel for the NCAR Atmospheric Analysis and Prediction
Division (1983)

Member of the Connecticut Academy of Science and Engineering (1985 to present)

Member of the NCAR Research Aviation Facility Panel (1985-1988, Chairman 1987)

Member of the Mesoscale Meteorology Committee of the European Geophysical Society (1989 to 1991)

Member of the Committee on Mesoscale Processes of the American Meteorology Society (1987-1990)

Associate Editor, AMS Journal of Atmospheric Science, (1988 to 1991)

Associate Editor, Tellus, (1991 to present)

Member Science Advisor Committee, U. S. Weather Research Program

Co-Chairman, USWRP Team on Orographic Effects (1996)

Chairman, NSF Review Panel for NCAR/MMM (1996)

Member of the UCAR Board of Trustees (1997-2003)

Yale Science and Engineering Advisory Committee (1989-91, 1999-2001)

Yale Advisory Comm. for the School of Forestry and Environmental Studies (1994-95)

Chairman, Univ. of Oklahoma Geoscience Review (1998)

Member: Univ. of Washington Geoscience Review (1999)

Co-Director of the Mesoscale Alpine Programme (1999)

Chair: Review Panel for the NCAR High Altitude Instrumented Platform for Environmental Research (2000-2001)

Member: Yale Environmental Studies Committee (2001)

Member: Committee to Review Yale's Science Curriculum: CYCE (2001-2002)

Member: Yale Advisory Committee for Environmental Management (2003-2004)

Chair: External Advisory Panel for the Atmospheric Technology Division, NCAR (2004)

Member: Yale Science Curriculum Committee (2003 to 2005)

Member: Yale Flint Glaciology Lecture Committee (2003 to 2008)

Member: Steering Committee for the Mesoscale Alpine Programme (1997 to 2003)

Chair: External Advisory Committee for the NCAR TIIMES Institute (2005)

Member: NRC Panel for the Decadal Review of NASA Earth Science: Health and Security(2005-2006)

Member: NRC Panel on the role of High End Computing in Science and Engineering(2006-2008)

Chair and Lead Author: NCAR Panel on Lower Atmosphere Observing Systems (2012)

Member: NCAR Study Group on gravity waves in the boundary layer (2012)

Member: Awards Committee for the American Meteorology Society (2012-2014)

Publications:

Rarefied Gas Dynamics

1968 Smith, R. B., P. Harbour and G. Bienkowski. Influence of secondary electrons on an electron beam probe. *Phys. Fluids*, **11**, 800-803.

1972 Electron-beam investigation of a hypersonic shock wave in nitrogen. *Phys. Fluids*, **15**, 1010-1017.

Theoretical Structural Geology and Rheology

1975 A unified theory of the onset of folding, boudinage, and mullion structure. *Geological Society of America Bulletin*, **86**, 1601- 1609.

1977 The formation of folds, boudinage, and mullions in non-Newtonian materials. *Geological Society of America Bulletin*, **88**, 312- 320.

1979 The folding of a strongly non-Newtonian layer. *Am. Jour. Sci.*, **279**, 272-287.

1982 Smith, R. B. and C. Neurath. The effect of material properties on growth rates of folding and boudinage. *J. Structural Geol.*, **4**, 215-229.

1982 A note on the constitutive relation for sea ice. *J. Glaciol.*, **29**, 191-195.

Dynamic Meteorology

1976 The generation of lee waves by the Blue Ridge. *J. Atmos. Sci.*, **33**, 507-519.

1977 The steepening of hydrostatic mountain waves. *J. Atmos. Sci.*, **34**, 1634-1654.

1978 A measurement of mountain drag. *J. Atmos. Sci.*, **35**, 1644-1654.

1979 The influence of the earth's rotation on mountain wave drag. *J. Atmos. Sci.*, **36**, 177-180.

1979 The influence of mountains on the atmosphere. B. Saltzman, Ed., *Adv. Geophys.*, **21**, 87-230.

1979 Some aspects of the quasi-geostrophic flow over mountains. *J. Atmos. Sci.*, **36**, 2385-2393.

1980 Linear theory of stratified hydrostatic flow past an isolated mountain. *Tellus*, **32**, 348-364.

1981 An alternative explanation for the destruction of the Hood Canal Bridge. *Bull. Am. Met. Soc.*, **62**, 1319-1320.

1982 Smith, R. B. and Y.-L. Lin. The addition of heat to a stratified airstream with application to the dynamics of orographic rain. *Quart. J. R. Met. Soc.*, **108**, 353-378.

1982 Synoptic observations and theory of orographically disturbed wind and surface pressure. *J. Atmos. Sci.*, **39**, 60-70.

1982 A differential advection model of orographic rain. *Mon. Wea. Rev.*, **110**, 306-309.

1983 Smith, R. B. and Y.-L. Lin. Orographic rain on the Western Ghats. In *Joint U.S.-China Symposium on Mountain Meteorology*, Academia Sinica, Beijing, PRC.

1984 Orographic generation of baroclinic waves. *Rivista di Meteorologica Aeronautica*, **44**, 219-224.

1984 A theory of lee cyclogenesis. *J. Atmos. Sci.*, **41**, 1159-1168.

1984 Hafner, T. and R. B. Smith. Pressure drag on the Alps in relation to synoptic events. *J. Atmos. Sci.*, **42**, 562-575.

1985 On severe downslope winds. *J. Atmos. Sci.*, **42**, 2597-2603.

1985 Comments on "Interaction of low-level flow with the Western Ghat Mountains and offshore convection in the summer monsoon" by Grossman and Durran. *Mon. Wea. Rev.*, **113**, 2176-2177.

- 1986 Lin, Y.-L. and R. B. Smith. The transient dynamics of airflow near a local heat source. *J. Atmos. Sci.*, **43**, 40-49.
- 1986 Current status of ALPEX Research in the United States. *Bull. Am. Met. Soc.*, **67**, 310-318.
- 1986 Further development of a theory of lee cyclogenesis. *J. Atmos. Sci.*, **43**, 1582-1602.
- 1986 Mesoscale Mountain Meteorology in the Alps, in *Scientific Results of the Alpine Experiment, Vol. II*, GARP Publications Series No. 27, World Meteor. Soc., p. 407-423.
- 1987 Tosi, E., R. B. Smith and M. Bradford. Aerial observations of stratospheric descent in a Gulf of Genoa cyclone. *Meteor. Atmos. Phys.*, **36**, 141-160.
- 1987 Aerial Observations of the Yugoslavian Bora. *J. Atmos. Sci.*, **44**, 269-297.
- 1987 Chen, W.-D. and R. B. Smith. The blocking of air by the Alps as deduced from low level trajectories. *Mon. Wea. Rev.*, **115**, 2578-2597.
- 1987 Wolf, W. and R. B. Smith. Length of day variations and mountain torque during El Niño. *J. Atmos. Sci.*, **44**, 3656-3660.
- 1987 Smith, R. B. and J.-L. Sun. Generalized hydraulic solutions pertaining to severe downslope winds. *J. Atmos. Sci.*, **44**, 2934-2939.
- 1988 Linear theory of stratified flow past an isolated mountain in isosteric coordinates, *J. Atmos. Sci.*, **45**, 3889-3896.
- 1989 Rottman, J. and R. B. Smith. A laboratory simulation of severe downslope winds. *Tellus*, **41 A**, 401-415.
- 1989 Hydrostatic flow over mountains. *Advances in Geophysics*, Academic Press, **31**, 1-41.
- 1989 Mechanisms of orographic Rain. *Meteorological Magazine*, **118**, 85-88.
- 1989 Mountain induced stagnation points in hydrostatic flow. *Tellus*, **41 A**, 270-274.
- 1989 Kocin, P. J. and R. B. Smith. The blizzards of 1888 and 1978. *Discovery Magazine*. **21**, 17-26. [Peabody Museum, New Haven].
- 1989 Comment on "Low Froude number flow past three dimensional obstacles. Part I: Baroclinically generated lee vorticies" by P. K. Smolarkiewicz and R. Rotunno. *J. Atmos. Sci.*, **46**, 3611-3613.
- 1990 Why can't stratified airflow rise over high ground? Chapter in *Atmospheric processes over Complex Terrain*, Ed. W. Blumen, Amer. Met. Soc. Boston, 323p.
- 1991 Kelvin-Helmholtz instability in severe downslope wind flow, *J. Atmos. Sci.*, **48**, 1319-1324.
- 1992 Reply to Fiedler, B. H., Comment on "Kelvin-Helmholtz instability in severe downslope wind flow", *J. Atmos. Sci.*, **49**, 2345-2346.
- 1992 Deuterium in North Atlantic Storm Tops. *J. of Atmos. Sci.*, **49**, 2041-2057.
- 1992 Salathé, E. and R. B. Smith. In Situ observations of temperature microstructure above and below the tropopause. *J. of Atmos. Sci.*, **49**, 2032-2036.
- 1993 Schär, C. and R. B. Smith. Shallow-water flow past isolated topography. Part I: Vorticity production and wake formation. *J. Atmos. Sci.*, **50**, 1373-1400.
- 1993 Schär, C. and R. B. Smith. Shallow-water flow past isolated topography. Part II: Transition to vortex shedding. *J. Atmos. Sci.*, **50**, 1401-1412.
- 1993 Smith, R. B. and S.Grønås. The 3-D mountain airflow bifurcation and the onset of flow splitting. *Tellus*, **45A**, 28-43.

- 1993 A hurricane beta-drift law. *J. of Atmos. Sci.*, **50**, 3213-3215.
- 1993 Smith, R. B. and V. Grubišić. Aerial observations of Hawaii's wake. *J. of Atmos. Sci.*, **50**, 3728-3750.
- 1993 Baines, P. and R. B. Smith. Upstream stagnation points in stratified flow past obstacles. *Dynamics of Oceans and Atmospheres*, **18**, 105-113.
- 1995 Smith, R. B. and D. Smith. Pseudo-inviscid wake formation by mountains in shallow water flow with a drifting vortex. *J. of Atmos. Sci.*, **52**, 436-454.
- 1995 Grubišić, V., R. B. Smith and C. Schär. The effect of bottom friction on shallow-water flow past an isolated obstacle. *J. of Atmos. Sci.*, **52**, 1985-2005.
- 1997 Smith, R. B., A. Gleason, P. Gluhosky and V. Grubišić. The wake of St. Vincent. *J. Atmos. Sci.*, **54**, 606-623.
- 1997 Smith, R. B., X. Li and B. Wang. Scaling laws for barotropic vortex beta drift. *Tellus*, **49A**, 474-485.
- 1997 Smith, R. B., et al. Local and remote effects of mountains on weather: Research needs and opportunities. *Bull. Amer. Met. Soc.*, **78**, 877-892.
- 1999 Pan, F. and R. B. Smith. Gap winds and wakes: SAR observations and numerical simulations. *J. Atmos. Sci.*, **56**, 905-923.
- 1999 He, H. and R. B. Smith. Stable isotope composition of water vapor in the atmospheric boundary layer above the forests of New England. *J. Geophys Res.*, **104**, 11657-11673.
- 1999 He, H. and R. B. Smith. An advective-diffusive isotopic evaporation-condensation model. *J. Geophys. Res.-Atmos.*, **104**, 11657-11673.
- 2000 Jiang, Q. and R. B. Smith. V-waves, bow shocks and wakes in supercritical hydrostatic flow. *J. Fluid Mech*, **406**, 27-53.
- 2000 Thenkabail, P. S., R. B. Smith, and E. DePauw. Hyperspectral vegetation indices for determining agricultural crop characteristics. *Remote Sens. Environ.*, **71**, 158-182.
- 2001 He H, Lee XH, Smith R. B., Deuterium in water vapor evaporated from a coastal salt marsh. *J. Geophys. Res.-Atmos.*, **106**, 12183-12191.
- 2001 Jiang, Q. and R. B. Smith. Ideal shocks in two-layer flow: Part 1, Under a rigid lid. *Tellus A*, **53**, 129-145.
- 2001 Jiang, Q. and R. B. Smith. Ideal shocks in two-layer flow: Part 2, Under a passive layer. *Tellus A*, **53**, 146-167.
- 2001 Bougeault P, Binder P, Buzzi A, et al., The MAP special observing period. *Bull Amer. Meteor. Soc.* **82**, 433-462.
- 2002 Stratified airflow over Mountains. Chapter 6 in *Environmental Stratified Flows*. Ed. R. Grimshaw, Kluwer Publishing, pp119-159.
- 2001 Editorial Staff, "Mountain Meteorology" in *Glossary of Meteorology*. In Encyclopedia of the Geosciences, American Meteorological Society, Academic Press.
- 2002 Hu, X.Z.;Lee,X; Stevens, D.E., Smith, R.B., A numerical study of nocturnal motion in forests. *Boundary-Layer Meteorology*, **102**, 199-223.
- 2002 Smith, R.B., S. Skubis, J. Doyle, A. Broad, N. Volkert, C. Kiemle, Mountain waves over Mt. Blanc: The role of a stagnant boundary layer, *J. Atmos. Sci.*, **59**, 2073-2092.

- 2003 Smith, R.B. Advection-diffusion-deposition from distributed sources. *Bound. Layer Meteor.*, **107**, 273-287.
- 2003 Smith, R.B., Q. Jiang, M. Fearon, P. Tabary, M. Dorninger, J. Doyle, R. Benoit. Orographic precipitation and air mass transformation: An Alpine example. *Quart. J. Roy. Met. Soc.*, **129** (588), 433-454.
- 2003 Doyle, J. and R.B. Smith, Periodic gravity waves over the Hohe Tauern. *Quart. J. Roy. Met. Soc.*, **129** (588), 799-823.
- 2003 Schär C, Sprenger M, Luthi D, Jiang QF, Smith RB, Benoit R.: Structure and dynamics of an Alpine potential-vorticity banner. *Quart. J. Roy. Meteor. Soc.*, **129** (588), 825-855.
- 2003 Jiang, Q., Smith, R. B., Doyle, J. D., The nature of the Mistral: observations and modeling of two MAP events. *Quart. J. Roy. Met. Soc.*, **129**(588), 857-875.
- 2003 He, H; Smith, R. B. and D. E. Aylor. Measurement of deuterium isotope flux ratio from an agricultural grassland, *J. Geophys. Res. (D Atmos.)*. **108**, no. D9 :doi: doi:10.1029/2002JD002491.
- 2003 Jiang, Q. and R.B. Smith, Cloud Timescales and orographic precipitation. *J. Atmos. Sci.*, **60**, 1543-1559.
- 2003 Jiang, Q. and R.B. Smith, Gravity Wave breaking in two-layer hydrostatic flow, *J. Atmos. Sci.*, **60**, 1159-1172.
- 2003 Smith, R.B., A linear time-delay model of orographic precipitation, *J. Hydrology*, **282**, 2-9.
- 2004 Smith, R. B. and I. Barstad. A Linear Theory of Orographic Precipitation. *J. Atmos. Sci.*, **61**, 1377-1391.
- 2004 Smith, R.B., Mountain Meteorology and Regional Climates, in *Atmospheric Turbulence and Mesoscale Meteorology*, Ed. E. Fedorovich, R. Rotunno, B. Stevens, Cambridge University Press, p193-222.
- 2004 Evans, J. and R.B. Smith, Middle East Climate Simulation and dominant precipitation processes, *Int. J. Climate*, **24**, 1671-1694.
- 2004 Hole, F. and R.B. Smith, Arid Land agriculture in Northeastern Syria, in *Land Change Science*, Ed. G. Gutman, Kluwer, Netherlands, 209-222.
- 2004 Smith R.B. and I. Barstad, A linear theory of orographic precipitation *J. Atmos. Sci.*, **61**, 1377-1391.
- 2005 Smith, R.B., I Barstad, L. Bonneau, The Oregon Climate Transition *J. Atmos. Sci.*, **62**, 177-191.
- 2005 Zaitchik, B., J. Evans, and R.B. Smith, MODIS-derived boundary conditions for a mesoscale climate model: Application to irrigated agriculture in the Euphrates Basin, *Mon. Wea. Rev.*, **133**, 1727-1743.
- 2005 Barstad, I. and R.B. Smith, Evaluation of an orographic precipitation model, *J. Hydrometeorology*, **6**, 85-99.
- 2005 Lee, X., S. Sargent, R.B. Smith, B. Tanner, In-situ measurement of water vapor isotopes for atmospheric and ecological applications. *Journal of Atmospheric and Oceanic Technology*, **22**, pp. 555-565.
- 2005 Smith, R.B. Analytical approach to shear diffusion and tracer age. *Boundary-Layer Meteorology*, **117**, 383-415.

- 2006 Smith, R.B., Progress on the theory of orographic precipitation, Chapter 1 in *Special Paper 398: Tectonics, climate, and landscape evolution*, edited by Sean D. Willett, Niels Hovius, Mark Brandon, and Don Fisher, Geological Society of America, Boulder.
- 2006 Evans, J.P. and R. Smith, Water vapor transport and the production of precipitation in the Eastern Fertile Crescent. *Journal of Hydrometeorology*, 7(6): 1295-1307.
- 2006 Jiang, QF; J. D. Doyle and R. B. Smith. Interaction between trapped waves and boundary layers. *J. Atmos. Sci.*, **63** (2), 617-633.
- 2006 Smith, RB; Jiang, QF; Doyle, JD. A theory of gravity wave absorption by a boundary layer. *J. Atmos. Sci.*, **63** (2), 774-781.
- 2006 Zaitchik, BF; Macalady, AK; Bonneau, LR; Smith, RB. 2006. Europe's 2003 heat wave: a satellite view of impacts and land-atmosphere feedbacks. *International Journal of Climatology* **26** (6), 743-769.
- 2006 Lee, X; R. B. Smith, and J. Williams. Water vapour $^{18}\text{O}/^{16}\text{O}$ isotope ratio in surface air in New England, USA. *Tellus-B*, **58** (4): 293-304.
- 2007 Smith R.B. and J.P. Evans. Orographic Precipitation and Water Vapor Fractionation over the southern Andes. *Journal of Hydrometeorology*, **8**, 3-19.
- 2007 Smith, R. B. Interacting Mountain Waves and Boundary Layers. *J. Atmos. Sci.*, **64**, 594-607.
- 2007 Jiang, Q., J. D. Doyle, W. Shouping, and R. B. Smith. On Boundary Layer Separation in the Lee of Mesoscale Topography. *J. Atmos. Sci.*, **64**, 401-420.
- 2007 Lee XH, Kim K, Smith R, Temporal variations of the O-18/O-16 signal of the whole-canopy transpiration in a temperate forest, GLOBAL BIOGEOCHEMICAL CYCLES 21 (3): Art. No. GB3013 AUG 25 2007
- 2007 Benjamin F. Zaitchik, Jason P. Evans, Roland A. Geerken, and Ronald B. Smith, Climate and Vegetation in the Middle East: Interannual Variability and Drought Feedbacks *Journal of Climate*, Volume 20, Issue 15 (August 2007) pp. 3924–3941
- 2007 Benjamin F. Zaitchik, Jason P. Evans, and Ronald B. Smith, Regional Impact of an Elevated Heat Source: The Zagros Plateau of Iran *Journal of Climate*, Volume 20, Issue 16 (August 2007) pp. 4133–4146
- 2007 Smith R.B. J.D. Doyle, Q. Jiang, S.A. Smith, Alpine Gravity Waves: Lessons from MAP regarding mountain waves generation and braking, *Quart. Journal Royal Met Soc.* 133, 917-936
- 2008 Jiang, Q., R.B. Smith, and J.D. Doyle, Impact of the Atmospheric Boundary Layer on Mountain Waves. *J. Atmos. Sci.*, **65**, 592–608.
- 2008 Smith, R.B., B.K. Woods, J. Jensen, W.A. Cooper, J.D. Doyle, Q. Jiang, and V. Grubišić, 2008: Mountain Waves Entering the Stratosphere. *J. Atmos. Sci.*, **65**, 2543–2562
- 2008 Smith, R.B., A K-theory of dispersion, settling and deposition in the atmospheric surface layer, *Boundary Layer Meteorology*, 129, 371-393
- 2008 Kirshbaum, D.J. and R.B. Smith, 2008: Temperature and moist-stability effects on mid-latitude orographic precipitation. *Q.J.R.Meteorol. Soc.*, **134**, 1183-1200
- 2009 Kirshbaum, DJ; Smith, RB.: Orographic Precipitation in the Tropics: Large-Eddy Simulations and Theory. *J. Atmos. Sci.*, **66**, 2559-2578.

- 2009 Li, Y; Smith, RB; Grubišić, V, Using Surface Pressure Variations to Categorize Diurnal Valley Circulations: Experiments in Owens Valley. *Mon. Wea. Rev.*, **137**, 1753-1769.
- 2009 Assessment of Water Resources and Demands on Agriculture in the semiarid Middle East, 2009, R.A. Geerken, R.B. Smith, Z. Masri, Eddy De Pauw, Chapter 12 in “Remote Sensing of Global Croplands for Food Security”, Edited by John G. Lyon, Taylor and Francis , CRC Press, 467p
- 2009 Smith, RB ; Schafer, P; Kirshbaum, DJ; Regina, E, Orographic Precipitation in the Tropics: Experiments in Dominica. *J. Atmos. Sci.*, **66** , 1698-1716
- 2009 Smith, RB; Schafer, P; Kirshbaum, D; Regina, E, Orographic Enhancement of Precipitation inside Hurricane Dean. *J. Hydrometeorol.*, **10** , 820-831.
- 2010 Yanping Li, Ronald B. Smith, Observation and Theory of the Diurnal Continental Thermal Tide *J. Atmos. Sci.*, **67**,. 2752-2765 (doi: 10.1175/2010JAS3384.1)
- 2010 Yanping Li, Ronald B. Smith, The Detection and Significance of Diurnal Pressure and Potential Vorticity Anomalies East of the Rockies, *J. Atmos. Sci.*, **67**, 2734-2751 (doi: 10.1175/2010JAS3423.1)
- 2010 Bryan K. Woods, Ronald B. Smith, Energy Flux and Wavelet Diagnostics of Secondary Mountain Waves, *J. Atmos. Sci.*, **67**, 3721-3738 (doi: 10.1175/2009JAS3285.1)
- 2010 Woods, B.K. and R.B.Smith, Short wave signatures of stratospheric mountain wave breaking, *J. Atmos. Sci.*, **68**, 635-656
- 2010 Smith, R.B., Gravity Wave effects on Wind Farm efficiency, *Wind Energy*, Volume 13, Issue 5, 449–458
- 2011 Smith, R.B. Regime Diagrams for K-Theory Dispersion, *Boundary Layer Meteorology*, **139**, 501-519
- 2012 Mackey, C., X. Lee and R.B. Smith, , Remotely sensing the cooling effects of city scale efforts to reduce urban heat island, *Building and Environment*, **49**, 348-358
- 2012 Smith, R.B. et al. Orographic Precipitation in the Tropics: The Dominica Experiment, *Bulletin of the AMS*, 1567-1579
- 2012 Qingfang Jiang, James D. Doyle, Alex Reinecke, Ronald B. Smith, Stephen D. Eckermann, A Modeling Study of Stratospheric Waves over the Southern Andes and Drake Passage, *J. Atmos. Sci.*, **70**, 1668-1689
- 2013 Minder, J.R., R.B. Smith, Alison Nugent, The dynamics of ascent-forced orographic convection in the tropics: results from Dominica, *J. Atmos. Sci.*, **70**, 4067-4088
- 2013 Jiang, Q, J.D. Doyle, A. Reinecke, R.B. Smith, S.D. Eckermann, A modeling study of stratospheric Waves over the Southern Andes and Drake Passage, *J Atmos. Sci.*, **70**, 1668-1689
- 2014 Nugent, A. R.B. Smith, J.R. Minder, Wind speed control of tropical orographic convection, *J. Atmos. Sci.*, **71**, 2695-2712
- 2014 Zhao L, X Lee, RB Smith, K Oleson, Strong contributions of local background climate to urban heat islands. *Nature* **511**: 216-219.
- 2014 Nugent A. and R.B. Smith,, Initiating Moist Convection in an Inhomogeneous Layer by Uniform Ascent, *J. Atmos. Sci.*, **71**, 4597-4610
- 2015 Watson, C.D., R.B. Smith, A.D. Nugent, Processes controlling precipitation in shallow orographic trade-wind convection, *J. Atmos. Sci.*, **72**, 3051-3072
- 2015 Kruse C.G. and R.B. Smith: Gravity wave diagnostics and characteristics in mesoscale fields, *J. Atmos. Sci.*, **72**, 4372-4392

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