

# Curriculum Vitae for Kevin Hamilton

Kevin P. Hamilton  
International Pacific Research Center (IPRC)  
University of Hawaii  
Honolulu, HI 96822  
(808) 956-8327; kph "at" hawaii.edu

( *Research Gate* profile at <https://www.researchgate.net/profile/Kevin-Hamilton-3> )

## Education

1976: B.Sc. (Physics) Queen's University (Kingston, Ontario, Canada)

1977: M.Sc. (Physics) McMaster University (Hamilton, Ontario, Canada)

1981: Ph.D. (Geophysical Fluid Dynamics) Princeton University

## Employment

February 2019-present: Emeritus Professor, University of Hawaii

April-June 2015 and April-June 2017: Visiting Professor, Atmosphere and Ocean Research Institute (AORI), University of Tokyo

April 2008-July 2014: Director (Interim Director to March 2010), [International Pacific Research Center](#), University of Hawaii

July 2004-June 2007: Chair, Department of Meteorology, University of Hawaii

October 2000-July 2014: Professor, Department of Meteorology and International Pacific Research Center, University of Hawaii

1988-2000: Research Meteorologist, NOAA Geophysical Fluid Dynamics Laboratory

1987-1988: Visiting Scientist, Atmospheric and Oceanic Sciences, Princeton University

1985-1987: Assistant Professor, Department of Meteorology, McGill University

1982-1985: Research Fellow, Department of Oceanography, University of British Columbia

1981-1982: Postdoctoral Fellow, National Center for Atmospheric Research

## Concurrent Position

1988-2000: Visiting Lecturer with Rank of Associate Professor (1988-1997) and Full Professor (1997-2000), Program in Atmospheric and Oceanic Sciences, Princeton University

## **Awards and Honors**

1992: Canadian Meteorological and Oceanographic Society [\*President's Prize\*](#) for "outstanding contributions to the atmospheric and oceanic sciences"

1994: American Meteorological Society [\*Meisinger Award\*](#) for "wide-ranging and prolific research on the dynamics and climate of the atmosphere and ocean"

1997: NOAA Environmental Research Laboratories *Outstanding Scientific Paper Award*

2000: American Geophysical Union [\*Jule Charney Lecturer\*](#)

2001: Elected [\*Fellow of the American Meteorological Society\*](#)

## **Editorships and Editorial Board Memberships**

1997-2000: Associate Editor for *Reviews of Geophysics* (American Geophysical Union)

2001-2003: Editorial Advisory Board for Kluwer (now Springer) Publishing [\*Atmospheric and Oceanic Sciences Library\*](#) monograph series

2001-2008: Editor for *Atmospheric Chemistry and Physics* (European Geophysical Union)

2004-2012: Co-Chief Editor for Springer Publishing [\*Atmospheric and Oceanic Sciences Library\*](#) monograph series

2008-2015: Editorial Advisory Board for the *Journal of Advances in Modeling Earth Systems (JAMES)* (American Geophysical Union)

2010-2014: Associate Editor for [\*Atmosphere-Ocean\*](#) (Canadian Meteorological and Oceanographic Society)

2013-2018: Editor for [\*Progress in Earth and Planetary Science\*](#) (Japan Geoscience Union)

2013-present: [\*Editorial Advisory Board for Progress in Earth and Planetary Science\*](#) (Japan Geoscience Union)

2021-present: [\*Topic Editor for History of Geo- and Space Sciences\*](#) (Copernicus)

## **Notable Service to University of Hawaii and the Science Research Community**

2011-2014: [\*Founding University Director\*](#) of the [\*Pacific Islands Climate Adaptation Science Center\*](#)

## **Service on External Review Committees**

2005-2007: External Advisory Panel for the NCAR Institute for Integrative and Multidisciplinary Earth Studies (TIIMES)

2008-2009: External Advisory Panel for the NCAR Earth-Sun Systems Laboratory (ESSL)

2008-2009: Chair of External Advisory Panel for the NCAR Institute for Integrative and Multidisciplinary Earth Studies (TIIMES)

2019-2020: External Evaluation Committee for Earth and Planetary Science Department, Graduate School of Science, University of Tokyo

## **Scientific Committee Chairmanships**

1993-2007: Co-Chair of Committee on [Gravity Wave Processes and Parameterization](#) of the SPARC (Stratospheric Processes and their Role in Climate) Initiative of the World Climate Research Program

1999-2002: Co-Chair of SCOSTEP EPIC (“Equatorial Processes Including Coupling”) Program Working Group 1 (Dynamics)

1999-2007: [President](#) of the [International Commission on the Middle Atmosphere](#)

## **Selected Scientific Committee Memberships**

1984-1987: Canadian Atmospheric Environment Service Advisory Committee on Stratospheric Pollution

1986-1994: American Meteorological Society Scientific and Technical Activities Committee for the Middle Atmosphere

1987-1995: International Commission on the Middle Atmosphere (formerly the International Commission on the Meteorology of the Upper Atmosphere)

1994-2005: Committee on Middle Atmosphere Climatology of the SPARC (Stratospheric Processes and their Role in Climate) Initiative of the World Climate Research Program

1995-2005: [Scientific Steering Group for SPARC](#) (Stratospheric Processes and their Role in Climate) Initiative of the World Climate Research Program

1997-2007: Advisory Committee for the SPARC Data Center, Stony Brook University

1998-2001: Science Advisory Panel for the Canadian Climate Research Network

1999-2007: International Association for Meteorology and Atmospheric Science (IAMAS) Executive Committee

2000-2002: American Geophysical Union Selection Committee for the Walter Sullivan and David Perlman Awards (for excellence in earth science journalism)

2007-2011: [Executive Bureau](#) of the Scientific Committee on Solar-Terrestrial Physics ([SCOSTEP](#))

2012-2018: Executive Committee for the WCRP/SPARC [International Quasibiennial Oscillation Initiative](#) (QBOi)

### **Selected Other Scientific Community Service (1996-present)**

Director of NATO Advanced Research Workshop on “Gravity Wave Processes and Their Parameterization in Global Climate Models”, Santa Fe, New Mexico, April 1996

Member of American Geophysical Union Search Committee for *Journal of Geophysical Research* Editors in 1999-2000

Co-Director of the [School on Physics of the Equatorial Atmosphere, International Centre for Theoretical Physics](#) (Trieste, Italy) September-October 2001

Co-Convener of the SCOSTEP “Equatorial Processes Including Coupling” Symposium (Kyoto, Japan) March 2002

Member of Scientific Program Committee for [AGU Western Pacific Geophysics Meeting](#) (Wellington, New Zealand) July 2002

Lead Convener of “Middle Atmosphere Science” Symposium at the 2003 IUGG Assembly (Sapporo, Japan) July 2003

Convener of [AGU Chapman Conference on “Gravity Wave Processes and Parameterization”](#) (Kona, Hawaii) January 2004

Member of Scientific Program Committee for [AGU Western Pacific Geophysics Meeting](#) (Honolulu) August 2004

Local Organizer for the Intergovernmental Panel on Climate Change (IPCC) [“Workshop on Analysis of Climate Model Simulations for the Fourth Assessment Report”](#) (Honolulu) March 2005

Member of Scientific Program Committee for the Tenth IAGA General Assembly (Toulouse, France) July 2005

Local Organizer for the US Climate Change Science Program [Federal Advisory Panel Meeting](#) and “Workshop on Weather and Climate Extremes in a Changing Climate” (Honolulu) October-November 2006

Lead Convener for the “Middle Atmosphere Science” Symposium at the 2007 IUGG General Assembly (Perugia, Italy) July 2007

Member of Scientific Organizing Committee for the “[Third International Workshop on High-Resolution Atmospheric Modeling and Clouds](#)” (Honolulu) December 2008

Local Organizer for [the Intergovernmental Panel on Climate Change \(IPCC\) “Workshop on New Science Directions and Activities Relevant to the IPCC AR5”](#) (Honolulu) March 2009

Member of Organizing Committee for the WCRP/WWRP “[Year of Tropical Convection Implementation Planning Meeting](#)” (Honolulu) July 2009

Co-convener for the “[Second OFES International Workshop](#)” (Honolulu) December 2009

Convener for [AGU Chapman Conference on “Atmospheric Gravity Waves and Their Effects on General Circulation and Climate”](#) (Honolulu) February 2011

Local Organizer for the “[APEC Climate Center 2011 Annual Symposium](#)” (Honolulu) October 2011

Co-Convener for the “[Fourth OFES International Workshop](#)” (Honolulu) December 2011

Local Organizer for the “[WCRP Workshop on CMIP5 Climate Model Analysis](#)” (Honolulu) March 2012

Local Organizing Committee for the “[Second University of Hawaii and University of Tokyo Joint Symposium on Ocean, Coastal, and Atmospheric Sciences](#)” (Honolulu) June 2012

Co-Convener for the “[NSF US-Japan Bilateral Workshop on the Tropical Tropopause Layer: State of Current Science and Future Observational Needs](#)” (Honolulu) October 2012

Co-Convener for the “[Fifth OFES International Workshop](#)” (Nago City, Japan) January 2013

Member of Scientific Organizing Committee for the “[QBO Modeling and Reanalyses Workshop](#)”, (Victoria, Canada) March 2015.

Co-Convener for the [WCRP/SPARC workshop on “Atmospheric Gravity Waves: Sources and Effects on Weather and Climate”](#) (State College, Pennsylvania) May 2016.

Member of Scientific Program Committee for the [WCRP/SPARC workshop on “The QBO and Its Global Influence: Past, Present and Future”](#) (Oxford, UK) September 2016.

Member of Scientific Organizing Committee for the [Joint SPARC Dynamics & Observations Workshop](#). (Kyoto, Japan) October 2017.

Presented opening talk (via zoom) for the WCRP/SPARC online celebration of the 60<sup>th</sup> anniversary of the discovery of the QBO “[The Discovery of the QBO and Related Developments 1883-1961](#)” July 2021.

## **Contributions to General Community Service, Outreach and Pre-college Education**

- Local and national media interactions, including: (i) an interview about Hamilton’s research on volcanic effects on climate appeared in the [April 30, 2001 Honolulu Advertiser](#); (ii) quoted in *Honolulu Weekly* September 24, 2003; (iii) quoted in a story about Hawaii drought in *Ka Leo o Hawaii*, November 20, 2003; (iv) a radio interview on climate modeling using the JAMSTEC Earth Simulator appeared as an [AAAS Science Update](#) short feature broadcast nationally on September 21, 2004; (v) interview and news story on high resolution modeling in *Science* (“Sharpening Up Models for a Better View of the Atmosphere” by R. Kerr, [Science, 313, 1040](#), August 25, 2006); (vi) an article on Hamilton’s research on global warming effects in Hawaii appeared on [August 13, 2006 in the Honolulu Star-Bulletin](#); (vii) an article on Hamilton’s research on global warming research was featured by [USA Today on August 14, 2006](#); (viii) Hamilton interview in [UH Today](#) Fall 2006; (ix) Hamilton appeared on [Business Beyond the Reef](#) radio show produced by *Hawaii Public Radio* on October 17, 2006; (x) Hamilton quoted in a front page article “Floods, Hotter Climate in Isles Likely by 2090” in the [February 25, 2007 Honolulu Advertiser](#); (xi) Hamilton appeared on [ThinkTech Hawaii](#) radio show produced by *Hawaii Public Radio* on August 15, 2007; (xii) Hamilton’s research on atmospheric tides reported in [Science Daily](#), December 14, 2008; (xiii) Hamilton’s research project featured in the U Hawaii alumni magazine [Malamalama](#), March 2009; (xiv) lecture reported in [Ka `Ohana](#) May 2009; (xv) Hamilton quoted in a *Honolulu Advertiser* article on weather modification October 19, 2009; (xvi) Hamilton appeared on [Energy Futures](#) radio show produced by *Hawaii Public Radio* on December 7, 2009; (xvii) Hamilton interview featured in the *Honolulu Advertiser* science and environment blog [Raising Islands December 15, 2009](#); (xviii) an interview with Hamilton about global warming broadcast on the [KITV Evening News February 25, 2010](#); (xix) story on Hamilton’s cloud climate feedback research reported in several media outlets including *The Discovery Channel Online* and in [New Scientist](#), November/December 2010; (xx) Hamilton quoted in the [August 24, 2011 Honolulu Weekly](#) in a story on climate change considerations for wind power proposals in Hawaii; (xxi) interview with Hamilton about the APEC Climate Center symposium broadcast on *New Tang Dynasty TV Network* news October 18, 2011; (xxii) quoted in [story on Hawaiian natural environment](#) in *Alaskan Airlines Magazine*, August 2012; (xxiii) story about NASA *Curiosity* rover observations confirming Hamilton’s prediction of diurnal pressure variations in the Martian atmosphere reported in online media including *Popular Science*, *phys.org*, *Space Daily*, [Astrobiology Magazine](#), September 2012; (xxiv) paper in *Nature* coauthored with Y. Kawatani received publicity e.g. in [phys.org](#), *Science Daily*, [Summit County Voice](#) and *Environmental Research Web*, while in Japan JAMSTEC issued a [press release \(English version\)](#) and held a press

conference in Tokyo on May 22, 2013 resulting in stories in [many Japanese newspapers](#) including *Asahi Shimbun*, *Tokyo Shimbun*, *Chunichi Shimbun* and the Japanese website of the *Wall Street Journal*; (xxv) Featured on *ThinkTech Hawaii* internet TV show on February 17, 2014 “[Bringing Climate Change Home](#)”; (xxvi) Featured on *ThinkTech Hawaii* internet TV show on April 28, 2014 “[Big Data at Manoa](#)”; (xxvii) quoted in stories about recent research in *Environmental Research Web* and *AAAS Science* September 8, 2016; (xxviii) report on Hawaii climate modeling project appeared in *Raising Islands*, November 2016; (xxix) interview on rainfall study broadcast on *Hawaii Public Radio, February 13, 2017*; (xxx) research on tropical rainfall featured on the *AGU Geospace Blog*, in [phys.org](#), in *For Kauai* and in *Minneapolis Star-Tribune*, February 2017; (xxxi) Featured on *ThinkTech Hawaii* internet TV show on March 20, 2017 “[A Letter from the Sky: Weather Influenced by the Upper Atmosphere](#)” (xxxii) research on Hawaii snow cover featured on the *AGU Geospace Blog*, the *Hawaii Tribune-Herald* the *Honolulu Star-Advertiser* and *Science Daily*, May 2017; (xxxiii) quoted in articles related to “Climate Change in Hawaii” on the *KGMB/KHNL Hawaii News Now* web page on [August 17, 2017](#), [August 23, 2017](#); & [August 28, 2017](#); (xxxiv) research featured in an article in *The Guardian* newspaper (UK) November 14, 2017; (xxxv) interview about climate change and wildfire in Hawaii was broadcast on the *KGMB/KHNL Hawaii News Now* nightly news on September 18, 2018 ([video of broadcast, web posting](#)); (xxxvi) interviewed for *KGMB/KHNL Hawaii News Now* story on [Hawaii winter weather extremes February 28, 2019](#) ([video and web posting](#)); (xxxvii) research on global atmospheric resonant modes featured in stories published in *The Atlantic*, in *Quanta Magazine*, in stories in *Physics World*, and on the *MSNBC* web site, July-August 2020; (xxxviii) work featured in a [story in the “Weather Eye”](#) column of *The Times of London*, October 21, 2021; (xxxix) work featured in a story in *Le Matin*, February 2, 2022. (xl) stories about research on Tonga eruption atmospheric pressure response featured in *Europa Press*, and the *New Zealand Herald*, September 20, 2022, and in *Science in Japan*, November 17, 2022.

- Reviewer for over 800 questions used in the 2006-2007 local, regional and national *US Academic Decathlon* competition for high school students (<http://usad.org/>)

- Expert for the Hawaii Special Deputy Attorney General’s Public Investigation of the 2006 Kaloko Dam Disaster (wrote part of [Appendix B](#) of the [Public Report](#) issued in 2007)

- Panelist for a discussion of global warming at the winter meeting of the International Association of Defense Counsel held in Waikoloa, Hawaii (February 11, 2008)

- Presented the [Keynote Address](#) at the 2009 Earth Day observance at Windward Community College

- Speaker at the “Mission to Planet Earth” panel at the Hawaii State Capitol for Hawaii’s [2009 World Space Week](#) observance

- Panelist at the forum on [Climate Change and Food Security](#) at the Kamakakuokalani Center for Hawaiian Studies (November 2010)

- Panelist in the NOAA-sponsored workshop [Managing Papahānaumokuākea National Marine Monument in the Context of Climate Change](#), Honolulu (June 12-14, 2012)
- Panelist in the NOAA-sponsored workshop on the [Status Review Report on 82 Coral Species Petitioned Under the Endangered Species Act](#), Honolulu (June 18, 2012)
- Briefed the Hawaii State Commission on Water Resource Management about climate projections; [staff briefing](#) June 10, 2014; formal testimony at public [Commission meeting](#) November 19, 2014
- Invited Faculty Speaker for professional workshop “[Rising Tides: Climate Change and the Economic and Business Impact on Hawaii](#)”, ([The Seminar Group for Legal and Professional Education](#)) November 6, 2015
- Judge for the annual trans-Pacific high school science fair [Pacific Symposium for Science and Sustainability](#), Honolulu (December 1, 2012; January 19, 2014, January 17, 2015; January 16, 2016; [January 14, 2017](#))
- Invited briefing on Hawaii climate change to the [Kaimuki Community Board](#), June 19, 2019

### **Teaching Experience** (full one-semester, three-credit courses unless noted otherwise)

#### *University of British Columbia*

1983, 1984, 1985: [Oceanography 518](#) “Dynamical Meteorology”

1984: [Physics 421](#) “Introduction to Atmospheric Physics”

#### *McGill University*

1985: [Meteorology 410](#) “Dynamical Meteorology I”

1986, 1987: [Meteorology 411](#) “Dynamical Meteorology II”

1986-87: [Meteorology 653](#) “Climatology” (1/3 of a six-credit two-semester course)

#### *Princeton University*

1988, 1996, 2000: [Atmospheric and Oceanic Sciences 572](#) “Atmospheric and Oceanic Waves”

1988, 1989, 1990, 1991, 1992, 1993, 1994: [Geosciences 427](#) “Introduction to Terrestrial and Planetary Atmospheres” (1/2 of course)

1997: Environmental Studies 202: “Environmental Science, Policy and Management: Quantitative Assessments and Interventions” (1/3 of course)

1998: Geosciences 502/Civil Engineering 577 “Data Analysis and Modeling in the Environmental Sciences” (1/4 of course)

1998: Atmospheric and Oceanic Sciences 537 “Atmospheric Chemistry” (1/2 of course)

*University of Hawaii*

Fall 2001: MET 704 “Climate, Climate Modeling and Climate Change”

Fall 2002: MET 402 “Applied Atmospheric Dynamics”

Fall 2003: MET 704 “Climate, Climate Modeling and Climate Change”

Spring 2004: MET 765 “Seminar in Meteorology” (1-credit)

Spring 2005: MET 620 “Physical Meteorology” (1/2 of course), & MET 402 “Applied Atmospheric Dynamics”

Fall 2005: MET 200 “Atmospheric Processes and Phenomena” (1/2 of course)

Spring 2006: MET 620 “Physical Meteorology” (1/2 of course), & MET 765 “Seminar in Meteorology” (1-credit)

Spring 2007: MET 302 “Physical Meteorology”, & MET 704 “Climate, Climate Modeling and Climate Change”

Spring 2008: MET 302 “Physical Meteorology”

Fall 2008: MET 303 “Atmospheric Dynamics”

Fall 2009: MET 704 “Climate, Climate Modeling and Climate Change”

Spring 2010: FINANCE 659 “Mortgage/Weather Derivatives” (1/3 of course), & MET 302: “Physical Meteorology”

Fall 2010: MET 101 “Introduction to Meteorology” (1/2 of course), & MET 303: “Atmospheric Dynamics”

Summer Term 2011: FINANCE 659 “Mortgage/Weather Derivatives” (1/3 of course)

Spring 2012: MET620 “Physical Meteorology” (1/2 of course), & MET 402: “Applied Atmospheric Dynamics” (1/2 of course)

Summer Term 2012: FINANCE 659 “Mortgage/Weather Derivatives” (1/3 of course)

Spring 2013: MET 765 “Seminar in Meteorology” (1-credit)

Fall 2013: MET 101 “Introduction to Meteorology” (1/2 of course)

### *University of Tokyo Graduate School of Sciences*

Spring 2015: Earth and Planetary Science “[Special Lectures in Atmospheric and Oceanic Science IV](#)” (1-credit course)

### **M.S. Thesis Supervised**

Ahira Sanchez-Lugo. *An Index to Measure the Influence of Climate on Residential Natural Gas Demand*, Department of Meteorology, University of Hawaii, 71 pp. (2007).

### **Ph.D Theses Supervised**

Chung-Chun Ma. *Models of Planetary Wave Propagation in the Middle Atmosphere*. Atmospheric and Oceanic Sciences Program, Princeton University, 118 pp. (1990)

Elisa Manzini. *A Numerical Study of the Middle Atmosphere Response to Tropical and Subtropical Heat Sources*. Atmospheric and Oceanic Sciences Program, Princeton University, 173 pp. (1992)

Li Yuan. *Statistical Equilibrium Dynamics in a Forced-Dissipative  $f$ -Plane Shallow Water Model*, Atmospheric and Oceanic Sciences Program, Princeton University, 141 pp. (1993)

### **UH Postdoctoral Researchers Supervised**

Weijun Zhu. 2001-2003 ([now faculty member at Nanjing University of Information Science and Technology](#))

Markus Stowasser. 2003-2007 ([now head of natural catastrophe research & development for Allianz Insurance](#))

Axel Lauer. 2007-2012 ([now researcher at DLR Institute of Atmospheric Physics](#))

Minoru Kadota. 2008-2010 ([now assistant professor at Rikkyo University](#))

Takatoshi Sakazaki. (Japan Society for Promotion of Science Postdoctoral Fellow) 2016-2018 ([now Associate Professor in the Graduate School of Science at Kyoto University](#))

## Publications

### *Multi-author Books and Reports Edited*

K. Hamilton (editor). [\*Gravity Wave Processes - Their Parameterization in Global Climate Models\*](#). Springer-Verlag, 414 pp. (1997). ([a review](#)) ([another review](#))

L. Gray and K. Hamilton (editors). *Physics of the Equatorial Atmosphere*. Rutherford-Appleton Laboratory. Didcot, UK, 224 pp. (2003).

K. Hamilton and W. Ohfuchi (editors). [\*High Resolution Numerical Modeling of the Atmosphere and Ocean\*](#). Springer Publishing, 293 pp. (2008). ([a review](#))

### *Refereed Journal Articles*

[1] K. Hamilton. A Variational Principle for the Acoustic Attenuation of Metals in the Collision Regime. [\*Physica\*, \*\*A97\*\*, 181-188](#). (1979).

[2] K. Hamilton. Observations of the Solar Diurnal and Semidiurnal Surface Pressure Oscillations in Canada. [\*Atmosphere-Ocean\*, \*\*18\*\*, 89-97](#). (1980).

[3] K. Hamilton. The Geographical Distribution of the Solar Semidiurnal Surface Pressure Oscillation. [\*Journal of Geophysical Research\*, \*\*85\*\*, 1945-1949](#). (1980).

[4] K. Hamilton. Latent Heat Release as a Possible Forcing Mechanism for Atmospheric Tides. [\*Monthly Weather Review\*, \*\*109\*\*, 3-17](#). (1981).

[5] K. Hamilton. The Vertical Structure of the Quasi-biennial Oscillation: Observations and Theory. [\*Atmosphere-Ocean\*, \*\*19\*\*, 236-250](#). (1981).

[6] K. Hamilton. A Note on the Observed Diurnal and Semidiurnal Rainfall Variations. [\*Journal of Geophysical Research\*, \*\*86\*\*, 12122-12126](#). (1981).

[7] K. Hamilton. The Effects of Solar Tides on the General Circulation of the Martian Atmosphere. [\*Journal of the Atmospheric Sciences\*, \*\*39\*\*, 481-485](#). (1982).

[8] K. Hamilton. A Note on the Interaction Between a Thermally Forced Standing Internal Gravity Wave and the Mean Flow: Implications for the Theory of the Quasi-biennial Oscillation. [\*Journal of the Atmospheric Sciences\*, \*\*39\*\*, 1881-1886](#). (1982).

[9] K. Hamilton. Rocketsonde Observations of the Mesospheric Semiannual Oscillation at Kwajalein. [\*Atmosphere-Ocean\*, \*\*20\*\*, 281-286](#). (1982).

- [10] K. Hamilton. Some Features of the Climatology of the Northern Hemisphere Stratosphere Revealed by NMC Upper Atmosphere Analyses. *Journal of the Atmospheric Sciences*, **39**, 2737-2749. (1982).
- [11] K. Hamilton. Aspects of Wave Behaviour in the Mid and Upper Troposphere of the Southern Hemisphere. *Atmosphere-Ocean*, **21**, 40-54. (1983).
- [12] K. Hamilton. Diagnostic Study of the Momentum Balance of the Northern Hemisphere Winter Stratosphere. *Monthly Weather Review*, **111**, 1434-1441. (1983).
- [13] K. Hamilton. Quasi-biennial and Other Long Period Variations in the Solar Semidiurnal Barometric Oscillation: Observations, Theory and a Possible Application to the Problem of Monitoring Changes in Global Ozone. *Journal of the Atmospheric Sciences*, **40**, 2432-2443. (1983).
- [14] K. Hamilton. Calculation of the Effect of Stratospheric Mean Wind Variations on the Solar Semidiurnal Barometric Oscillation. *Atmosphere-Ocean*, **22**, 48-66. (1984).
- [15] K. Hamilton. Evidence for a Normal Mode Kelvin Wave in the Atmosphere. *Journal of the Meteorological Society of Japan*, **62**, 308-311. (1984).
- [16] K. Hamilton. Mean Wind Evolution Through the Quasi-biennial Cycle of the Tropical Lower Stratosphere. *Journal of the Atmospheric Sciences*, **41**, 2113-2125. (1984).
- [17] K. Hamilton. A Study of the Occurrence of Dynamically Unstable Conditions in the Middle Atmosphere. *Canadian Journal of Physics*, **62**, 963-967. (1984).
- [18] K. Hamilton. Detection of the Lunar Diurnal Atmospheric Tide. *Monthly Weather Review*, **112**, 1620-1625. (1984).
- [19] K. Hamilton and R. Garcia. Long Period Variations in the Solar Semidiurnal Atmospheric Tide. *Journal of Geophysical Research*, **89**, 11705-11710. (1984).
- [20] W. Emery and K. Hamilton. Atmospheric Forcing of Interannual Variability in the Northeast Pacific Ocean, Connections with El Niño. *Journal of Geophysical Research*, **90**, 857-868. (1985).
- [21] K. Hamilton. A Possible Relationship Between Tropical Ocean Temperatures and the Observed Amplitude of the Atmospheric (1,1) Rossby Normal Mode. *Journal of Geophysical Research*, **90**, 8071-8074. (1985).
- [22] K. Hamilton. A Study of the Variability of the Return Migration Route of Fraser River Sockeye Salmon. *Canadian Journal of Zoology*, **63**, 1930-1943. (1985).
- [23] K. Hamilton. The Initial Westerly Acceleration Phase of the Stratospheric Quasi-biennial Oscillation as Revealed in FGGE Analyses. *Atmosphere-Ocean*, **23**, 188-192. (1985).

- [24] K. Hamilton. Dynamics of the Stratospheric Semiannual Oscillation. *Journal of the Meteorological Society of Japan*, **64**, 227-244. (1986).
- [25] K. Hamilton and R. Garcia. Theory and Observations of the Short Period Normal Mode Oscillations of the Atmosphere. *Journal of Geophysical Research*, **91**, 11867-11875. (1986).
- [26] K. Hamilton. Early Canadian Weather Observers and “The Year Without a Summer”. *Bulletin of the American Meteorological Society*, **67**, 524-532. (1986).
- [27] K. Hamilton and R. Garcia. El Niño/Southern Oscillation Events and Their Associated Midlatitude Teleconnections 1532-1828. *Bulletin of the American Meteorological Society*, **67**, 1354-1361. (1986).
- [28] F. Zwiers and K. Hamilton. The Simulation of Atmospheric Tides in the Canadian Climate Centre General Circulation Model. *Journal of Geophysical Research*, **91**, 11877-11898. (1986).
- [29] P. Cummins, L. Mysak and K. Hamilton. Generation of Annual Rossby Waves in the North Pacific by the Wind Stress Curl. *Journal of Physical Oceanography*, **16**, 1165-1178. (1986).
- [30] K. Hamilton. General Circulation Model Simulation of the Structure and Energetics of Atmospheric Normal Modes. *Tellus*, **39A**, 435-459. (1987).
- [31] K. Hamilton. Interannual Environmental Variability and North American Fisheries. *Bulletin of the American Meteorological Society*, **68**, 1541-1548. (1987).
- [32] K. Hamilton. A Detailed Examination of the Extratropical Response to Tropical El Niño/ Southern Oscillation Events. *Journal of Climatology*, **8**, 67-86. (1988).
- [33] K. Hamilton and A. Allingham. A Note on Equatorial Atlantic Sea Surface Temperature Variations 1890-1979. [Atmosphere-Ocean](#), **26**, 668-678. (1988).
- [34] K. Hamilton and J. Mahlman. General Circulation Model Simulation of the Semiannual Oscillation in the Tropical Middle Atmosphere. *Journal of the Atmospheric Sciences*, **45**, 3212-3235. (1988).
- [35] K. Hamilton. Interhemispheric Asymmetry and Annual Synchronization of the Ozone Quasi-biennial Oscillation. *Journal of the Atmospheric Sciences*, **46**, 1019-1025. (1989).
- [36] K. Hamilton. A Look at the Recently Proposed Solar-QBO-Weather Relationship. *Journal of Climate*, **3**, 497-503. (1990).
- [37] K. Hamilton. Climatological Statistics of Stratospheric Inertia-gravity Waves Deduced from Historical Rocketsonde Wind and Temperature Data. *Journal of Geophysical Research*, **96**, 20831-20839. (1991).

- [38] K. Hamilton and L. Yuan. Experiments on Tropical Stratospheric Mean Wind Variations in a Spectral General Circulation Model. *Journal of the Atmospheric Sciences*, **49**, 2464-2483. (1992).
- [39] E. Manzini and K. Hamilton. Middle Atmospheric Travelling Waves Forced by Latent and Convective Heating. *Journal of the Atmospheric Sciences*, **50**, 2180-2200. (1993).
- [40] K. Hamilton. An Examination of Observed Southern Oscillation Effects in the Northern Hemisphere Stratosphere. *Journal of the Atmospheric Sciences*, **50**, 3468-3473. (1993).
- [41] K. Hamilton. A General Circulation Model Simulation of El Niño Effects in the Extratropical Northern Hemisphere Stratosphere. *Geophysical Research Letters*, **20**, 1803-1806. (1993).
- [42] L. Yuan and K. Hamilton. Equilibrium Dynamics in a Forced-Dissipative  $f$ -Plane Shallow Water Model. *Journal of Fluid Mechanics*, **280**, 369-394. (1994).
- [43] K. Hamilton, R.J. Wilson, J. Mahlman and L. Umscheid. Climatology of the SKYHI Troposphere-Stratosphere-Mesosphere General Circulation Model. *Journal of the Atmospheric Sciences*, **52**, 5-43. (1995).
- [44] K. Hamilton. Interannual Variability in the Northern Hemisphere Winter Middle Atmosphere in Control and Perturbed Experiments with the SKYHI General Circulation Model. *Journal of the Atmospheric Sciences*, **52**, 44-66. (1995).
- [45] K. Hamilton. Comprehensive Modeling of Middle Atmospheric Climate: Some Recent Results. *Climate Dynamics*, **11**, 223-241. (1995).
- [46] K. Hamilton. Comment on "Global QBO in Circulation and Ozone. Part I: Reexamination of Observational Evidence". *Journal of the Atmospheric Sciences*, **52**, 1834-1838. (1995).
- [47] K. Hamilton and R.A. Vincent. High-Resolution Radiosonde Data Offer New Prospects for Research. *Eos*, **74**, 497-507. (1995).
- [48] R.J. Wilson and K. Hamilton. Comprehensive Model Simulation of Tides in the Martian Atmosphere. *Journal of the Atmospheric Sciences*, **53**, 1290-1326. (1996).
- [49] K. Hamilton. Comprehensive Meteorological Modeling of the Middle Atmosphere: A Tutorial Review. *Journal of Atmospheric and Terrestrial Physics*, **58**, 1591-1628. (1996).
- [50] P. Jones, K. Hamilton and R. Wilson. A Very High-Resolution General Circulation Model Simulation of the Global Circulation in Austral Winter. *Journal of the Atmospheric Sciences*, **54**, 1107-1116. (1997).

- [51] J. Forbes, M. Hagan, X. Zhang and [K. Hamilton](#). Upper Atmosphere Tidal Oscillations Due to Latent Heat Release in the Tropical Troposphere. *Annales Geophysicae*, **15**, 1165-1175. (1997).
- [52] [K. Hamilton](#). Observation of an Ultra-Slow Large-Scale Wave Near the Tropical Tropopause. *Journal of Geophysical Research*, **102**, 13457-13464. (1997).
- [53] [K. Hamilton](#) and R. Hemler. Appearance of a Super-Typhoon in a Global Climate Model Simulation. *Bulletin of the American Meteorological Society*, **78**, 2874-2876. (1997).
- [54] [K. Hamilton](#). An Imposed Quasi-biennial Oscillation in a Comprehensive General Circulation Model: Response of the Tropical and Extratropical Circulation. *Journal of the Atmospheric Sciences*, **55**, 2393-2418. (1998).
- [55] [K. Hamilton](#). Observations of Tropical Stratospheric Winds Before World War II. *Bulletin of the American Meteorological Society*, **79**, 1367-1371. (1998).
- [56] [K. Hamilton](#). Dynamics of the Tropical Middle Atmosphere: A Tutorial Review. [Atmosphere-Ocean](#), **36**, 319-354. (1998).
- [57] [K. Hamilton](#). Dynamical Coupling of the Middle and Lower Atmosphere: Historical Background to Current Research. *Journal of Atmospheric and Solar-Terrestrial Physics*, **61**, 73-84. (1999).
- [58] [K. Hamilton](#), R.J. Wilson and R.S. Hemler. Middle Atmosphere Simulated with High Vertical and Horizontal Resolution Versions of a GCM: Improvement in the Cold Pole Bias and Generation of a QBO-Like Oscillation in the Tropics. *Journal of the Atmospheric Sciences*, **56**, 3829-3846. (1999).
- [59] J. Koshyk, [K. Hamilton](#) and J.D. Mahlman. Simulation of the Mesoscale Spectral Regime in the GFDL SKYHI General Circulation Model. *Geophysical Research Letters*, **26**, 843-846. (1999).
- [60] J. Koshyk, B. Boville, [K. Hamilton](#), E. Manzini and K. Shibata. The Kinetic Energy Spectrum of Horizontal Motions in Middle Atmosphere Models. *Journal of Geophysical Research*, **104**, 27177-27190. (1999).
- [61] L. Bruhwiler and [K. Hamilton](#). A Numerical Simulation of the Ozone QBO in a Comprehensive General Circulation Model. *Journal of Geophysical Research*, **104**, 30525-30558. (1999).
- [62] [K. Hamilton](#) and S. Fan. Effects of the Stratospheric QBO on Long-Lived Greenhouse Gasses in the Troposphere. *Journal of Geophysical Research*, **105**, 20581-20587. (2000).
- [63] [K. Hamilton](#) and R.A. Vincent. Field Experiment to Examine Gravity Waves in the Middle Atmosphere. *Eos*, **81**, 517. (2000).

- [64] S. Pawson, K. Kodera, K. Hamilton, T. Shepherd, S. Beagley, B. Boville, J. Farrara, T. Fairlie, A. Kitoh, W. Lahoz, U. Langematz, E. Manzini, D. Rind, A. Scaife, K. Shibata, P. Simon, R. Swinbank, L. Takacs, R. Wilson, J. Al-Saadi, M. Amodei, M. Chiba, L. Coy, J. de Grandpre, R. Eckman, M. Fiorino, W. Grose, H. Koeide, J. Koshyk, D. Li, J. Lerner, N. McFarlane, C. Mechoso, A. Molod, A. O'Neil, R. Pierce, W. Randel, R. Rood, and F. Wu. The GCM-Reality Intercomparison for SPARC: Scientific Issues and Initial Results. *Bulletin of the American Meteorological Society*, **81**, 781-796. (2000).
- [65] K. Hamilton, R.J. Wilson and R. Hemler. Spontaneous Stratospheric QBO-Like Oscillations Simulated by the GFDL SKYHI General Circulation Model. *Journal of the Atmospheric Sciences*, **58**, 3271-3292. (2001).
- [66] J. Koshyk and K. Hamilton. The Horizontal Kinetic Energy Spectrum and Spectral Budget Simulated by a High-Resolution Troposphere-Stratosphere-Mesosphere GCM. *Journal of the Atmospheric Sciences*, **58**, 329-348. (2001).
- [67] M. Baldwin, L. Gray, T. Dunkerton, K. Hamilton, P. Haynes, W. Randel, J. Holton, M. Alexander, I. Hirota, T. Horinouchi, D. Jones, J. Kinnnersley, C. Marquardt, K. Sato and M. Takahashi. The Quasi-biennial Oscillation. *Reviews of Geophysics*, **39**, 179-229. (2001).
- [68] K. Hamilton and W. Hsieh. Representation of the QBO in the Tropical Stratosphere Wind by Nonlinear Principal Component Analysis. *Journal of Geophysical Research*, **107**, D15, ACL3-1-10. (2002).
- [69] M. Bittner, D. Offermann, H.-H. Graf, M. Donner and K. Hamilton. An 18-year Time Series of OH Rotational Temperatures and Middle Atmosphere Decadal Variations. *Journal of Atmospheric and Solar-Terrestrial Physics*, **64**, 1147-1166. (2002).
- [70] G. Stenchikov, A. Robock, V. Ramaswamy, M. Schwarzkopf, K. Hamilton and S. Ramachandran. Arctic Oscillation Response to the 1991 Mount Pinatubo Eruption: Effects of Volcanic Aerosols and Ozone Depletion. *Journal of Geophysical Research*, **107**, D24, 4803-4818. (2002).
- [71] K. Hamilton. On the Quasi-decadal Modulation of Stratospheric QBO Period. *Journal of Climate*, **15**, 2562-2565. (2002).
- [72] W. Hsieh and K. Hamilton. Nonlinear Singular Spectrum Analysis of the Tropical Stratospheric Wind. *Quarterly Journal of the Royal Meteorological Society*, **129**, 2367-2382. (2003).
- [73] D. Offermann, M. Donner, P. Knieling, K. Hamilton, A. Menzel, B. Naujokat and P. Winkler. Indicators of Long-Term Changes in Middle Atmosphere Transports. *Advances in Space Research*, **32**, 1675-1684. (2003).

- [74] T. Horinouchi, S. Pawson, K. Shibata, U. Langematz, E. Manzini, M. Giorgetta, F. Sassi, R. Wilson, K. Hamilton, J. de Grandpre, and A. Scaife. Tropical Cumulus Convection and Upward Propagating Waves in Middle Atmosphere GCMs. *Journal of the Atmospheric Sciences*, **60**, 2765-2782. (2003).
- [75] K. Hamilton, A. Hertzog, F. Vial and G. Stenchikov. Longitudinal Variation of the Stratospheric Quasi-biennial Oscillation. *Journal of the Atmospheric Sciences*, **61**, 383-402. (2004).
- [76] G. Stenchikov, K. Hamilton, A. Robock, V. Ramaswamy and M.D. Schwarzkopf. Arctic Oscillation Response to the 1991 Pinatubo Eruption in the SKYHI GCM with a Realistic Quasi-biennial Oscillation. *Journal of Geophysical Research*, **109**, doi:10.1029/2003JD003699. (2004).
- [77] K. Hamilton, R.A. Vincent and P.T. May. The DAWEX Field Campaign to Study Gravity Wave Generation and Propagation. *Journal of Geophysical Research*, **109**, doi:10.1029/2003JD004393. (2004).
- [78] W. Randel, P. Udelhofen, E. Fleming, M. Geller, M. Gelman, K. Hamilton, D. Karoly, D. Ortland, S. Pawson, R. Swinbank, F. Wu, M. Baldwin, M.-L. Chanin, P. Keckhut, K. Labitzke, E. Remsberg, A. Simmons, D. Wu. The SPARC Intercomparison of Middle Atmosphere Climatologies. *Journal of Climate*, **17**, 986-1003. (2004).
- [79] G. Boer, K. Hamilton and W. Zhu. Climate Sensitivity and Climate Change Under Strong Forcing. *Climate Dynamics*, **24**, 685-700. (2005).
- [80] M. Stowasser, K. Hamilton and G. Boer. Local and Global Climate Feedbacks in Models with Differing Climate Sensitivities. *Journal of Climate*, **19**, 193-209. (2006).
- [81] G. Stenchikov, K. Hamilton, R. Stouffer, B. Santer, A. Robock, V. Ramaswamy and H. Graf. Arctic Oscillation Response to Volcanic Eruptions in the IPCC AR4 Climate Models. *Journal of Geophysical Research*, **111**, D07107, doi:10.1029/2005JD006286. (2006).
- [82] M. Stowasser and K. Hamilton. Relationships Between Cloud Radiative Forcing and Local Meteorological Variables in Several Global Climate Models. *Journal of Climate*, **19**, 4344-4359. (2006).
- [83] Y. Takahashi, K. Hamilton and W. Ohfuchi. Explicit Global Simulation of the Mesoscale Spectrum of Atmospheric Motions. *Geophysical Research Letters*, L12812, doi:10.1029.2006GL026429. (2006).
- [84] T. Zhou, M. Geller and K. Hamilton. The Role of the Hadley Circulation and Downward Control in Tropical Upwelling. *Journal of the Atmospheric Sciences*, **63**, 2740-2757. (2006).
- [85] K. Hamilton. High Resolution Global Modeling of the Atmospheric Circulation. *Advances in Atmospheric Sciences*, **23**, 842-856. (2006).

- [86] Y. Wang, L. Zhou and K. Hamilton. Effect of Convective Entrainment/Detrainment on Simulation of Tropical Precipitation Diurnal Cycle. *Monthly Weather Review*, **135**, 567-585. (2007).
- [87] H. Annamalai, K. Hamilton and K. Sperber. South Asian Summer Monsoon and Relationship with ENSO in the IPCC AR4 Simulations. *Journal of Climate*, **20**, 1071-1092. (2007).
- [88] G. Boer, M. Stowasser and K. Hamilton. Inferring Climate Sensitivity from Volcanic Events. *Climate Dynamics*, **28**, 481-502. (2007).
- [89] M. Stowasser, Y. Wang and K. Hamilton. Tropical Cyclone Changes in the Western North Pacific in a Global Warming Scenario. *Journal of Climate*, **20**, 2378-2396. (2007).
- [90] M. Geller, T. Zhou and K. Hamilton. Morphology of Tropical Upwelling in the Lower Stratosphere. *Journal of the Atmospheric Sciences*, **65**, 2360-2374. (2008).
- [91] K. Hamilton, Y. Takahashi and W. Ohfuchi. The Mesoscale Spectrum of Atmospheric Motions Investigated in a Very Fine Resolution Global General Circulation Model. *Journal of Geophysical Research*, **113**, D18110, doi:10.1029/2008JD009785. (2008).
- [92] G. Boer and K. Hamilton. QBO Influence on Extratropical Predictive Skill. *Climate Dynamics*, **31**, 987-1000, doi:10.1007/s00382-008-0379-5. (2008).
- [93] K. Hamilton, S. Ryan and W. Ohfuchi. Topographic Effects on the Solar Semidiurnal Surface Tide Simulated in a Very Fine Resolution General Circulation Model. *Journal of Geophysical Research*, **113**, D17114, doi:10.1029/2008JD010115. (2008).
- [94] B. Lu, L. Pandolfo and K. Hamilton. Nonlinear Representation of the Quasi-Biennial Oscillation. *Journal of the Atmospheric Sciences*, **66**, 1886-1904. (2009).
- [95] J. Yu, Y. Wang and K. Hamilton. Response of Tropical Cyclone Potential Intensity to a Global Warming Scenario in the IPCC AR4 CGCMs. *Journal of Climate*, **23**, 1354-1373. (2010).
- [96] A. Lauer, K. Hamilton, Y. Wang, V. Phillips and R. Bennartz. The Impact of Global Warming on Marine Boundary Layer Clouds Over the Eastern Pacific – A Regional Model Study. *Journal of Climate*, **23**, 5844-5863. (2010).
- [97] Y. Kawatani, K. Hamilton and S. Watanabe. The Quasi-biennial Oscillation in a Double CO<sub>2</sub> Climate. *Journal of the Atmospheric Sciences*, **68**, 265-283. (2011).
- [98] C. Zhang, Y. Wang and K. Hamilton. Improved Representation of Boundary Layer Clouds over the Southeast Pacific in WRF-ARW Using a Modified Tiedtke Cumulus Scheme. *Monthly Weather Review*, **139**, 3489-3513. (2011).
- [99] K. Hamilton, Sereno Bishop, Rollo Russell, Bishop's Ring and the Discovery of the "Krakatoa Easterlies". *Atmosphere-Ocean*, **50**, 169-175. (2012).

- [100] Y. Kawatani, K. Hamilton and A. Noda. The Effects of CO<sub>2</sub> Concentration and Sea Surface Temperature Changes on the Quasi-biennial Oscillation. *Journal of the Atmospheric Sciences*, **69**, 1734-1749. (2012).
- [101] A. Lauer, R. Bennartz, K. Hamilton, and Y. Wang. Modeling the Response of Marine Boundary Layer Clouds to Global Warming: The Impact of Subgrid Scale Precipitation Formation. *Journal of Climate*, **25**, 6610-6626. (2012).
- [102] C. Zhang, Y. Wang, A. Lauer and K. Hamilton. Configuration and Evaluation of the WRF Model for the Study of Hawaiian Regional Climate. *Monthly Weather Review*, **140**, 3259-3277. (2012).
- [103] C. Zhang, Y. Wang, A. Lauer, K. Hamilton and F. Xie. Cloud Base and Top Heights in the Hawaiian Region Determined with Satellite and Ground-Based Measurements. *Geophysical Research Letters*, **39**, 15, doi:10.1029/2012GL052355. (2012).
- [104] A. Lauer and K. Hamilton. Simulating Clouds with Global Climate Models: A Comparison of CMIP5 Results with CMIP3 and Satellite Data. *Journal of Climate*, **26**, 3823-3845. (2013).
- [105] Y. Kawatani and K. Hamilton. Weakened Stratospheric Quasi-Biennial Oscillation Driven by Increased Mean Tropical Upwelling. *Nature*, **497**, 478-481. (2013).
- [106] A. Lauer, C. Zhang, O. Elison Timm, Y. Wang and K. Hamilton. Downscaling of Climate Change in the Hawaii Region Using CMIP5 Results: On the Choice of the Forcing Fields. *Journal of Climate*, **26**, 10006-10030 (2013).
- [107] Y. Kawatani, J.-N. Lee, and K. Hamilton. Interannual Variations of Stratospheric Water Vapor in MLS Observations and Climate Model Simulations. *Journal of the Atmospheric Sciences*, **71**, 4072-4085 (2014).
- [108] C. Zhang, Y. Wang, K. Hamilton and A. Lauer. Dynamical Downscaling of the Climate for the Hawaiian Islands, Part I: Present Day. *Journal of Climate*, **29**, 3027-3048 (2016).
- [109] Y. Kawatani, K. Hamilton, K. Miyazaki, M. Fujiwara and J. Anstey. Representation of the Tropical Stratospheric Zonal Wind in Global Atmospheric Reanalyses. *Atmospheric Chemistry & Physics*, **16**, 6681-6699. [doi:10.5194/acp-16-6681-2016](https://doi.org/10.5194/acp-16-6681-2016) (2016).
- [110] C. Zhang, Y. Wang, K. Hamilton and A. Lauer. Dynamical Downscaling of the Climate for the Hawaiian Islands, Part II: Projection for the Late 21st Century. *Journal of Climate*, **29**, 8333-8354 (2016).
- [111] S. Osprey, N. Butchart, J. Knight, A. Scaife, K. Hamilton, J. Anstey, V. Schenzinger and C. Zhang. An Unexpected Disruption of the Atmospheric Quasi-biennial Oscillation. *Science*, **353**, 1424-1427 (2016).

- [112] T. Sakazaki, K. Hamilton, C. Zhang and Y. Wang. Is There a Stratospheric Pacemaker Controlling the Daily Cycle of Tropical Rainfall? *Geophysical Research Letters*, **44**, 1998-2006. doi:10.1002/2017GL072549. (2017).
- [113] C. Zhang, K. Hamilton and Y. Wang. Monitoring and Projecting Snow on Hawaii Island. *Earth's Future*, **5**, 436-448. doi:10.1002/2016EF000478. (2017).
- [114] T. Sakazaki and K. Hamilton. Physical Processes Controlling the Tide in the Tropical Lower Atmosphere Investigated Using a Comprehensive Simulation Model. *Journal of the Atmospheric Sciences*, **74**, 2467-2487. doi:10.1175/JAS-D-17-0080. (2017).
- [115] K. Hamilton and T. Sakazaki. A Note on Apparent Solar Time and the Seasonal Cycle of Atmospheric Solar Tides. *Quarterly Journal of the Royal Meteorological Society*, **143**, 2130-2134. doi:10.1002/qj.3076. (2017).
- [116] K. Hamilton and T. Sakazaki. Exploring the 'Prehistory' of the Equatorial Stratosphere with Observations Following Major Volcanic Eruptions. *Weather*, **73**, 154-159. doi:10.1002/wea.3043. (2018).
- [117] S. Watanabe, K. Hamilton, S. Osprey, Y. Kawatani and E. Nishimoto. First Successful Hindcasts of the 2016 Disruption of the Stratospheric Quasi-biennial Oscillation. *Geophysical Research Letters*, **45**, 1602-1610. doi/full/10.1002/2017GL076406 (2018).
- [118] N. Butchart, J. Anstey, K. Hamilton, S. Osprey, C. McLandress, A. Bushell, Y. Kawatani, Y.-H. Kim, F. Lott, J. Scinocca, T. Stockdale, O. Bellprat, P. Braesicke, C. Cagnazzo, C.-C. Chen, H.-Y. Chun, M. Dobrynin, R. Garcia, J. Garcia-Serrano, L. Gray, L. Holt, T. Kerzenmacher, H. Naoe, Pohlmann, J. Richter, A. Scaife, V. Schenzinger, F. Serva, S. Versick, S. Watanabe, K. Yoshida, and S. Yukimoto. Overview of Experiment Design and Comparison of Models Participating in Phase 1 of the SPARC Quasi-Biennial Oscillation initiative (QBOi), *Geoscientific Model Development*, **11**, 1009-1032, <https://doi.org/10.5194/gmd-11-1009-2018>. (2018).
- [119] T. Sakazaki and K. Hamilton. Discovery of a Lunar Air Temperature Tide Over the Ocean: A Diagnostic of Air-Sea Coupling. *Nature Partner Journal Climate and Atmospheric Science*, **1:25**, 1-7. doi:10.1038/s41612-018-0033-9. (2018).
- [120] Y. Kawatani, K. Hamilton, L. Gray, S. Osprey, S. Watanabe and Y. Yamashita. The Effects of a Well-Resolved Stratosphere on the Simulated Boreal Winter Circulation in a Climate Model. *Journal of the Atmospheric Sciences*, **76**, 1203-1226. doi:10.1175/JAS-D-18-0206.1 (2019).
- [121] Y. Kawatani, K. Hamilton, K. Sato, T. Dunkerton, S. Watanabe and K. Kikuchi. ENSO Modulation of the QBO: Results from MIROC Models with and without Non-orographic Gravity Wave Parameterization. *Journal of the Atmospheric Sciences*, **76**, 3893-3917. doi.org/10.1175/JAS-D-19-0163.1. (2019).

- [122] M. Baldwin, T. Birner, G. Brasseur, J. Burrows, N. Butchart, R. Garcia, M. Geller, L. Gray, K. Hamilton, N. Harnik, M. Hegglin, U. Langematz, A. Robock, K. Sato, A. Scaife. 100 Years of Progress in Understanding the Stratosphere and Mesosphere. In *A Century of Progress in Atmospheric and Related Sciences: Celebrating the American Meteorological Society Centennial. Meteorological Monographs*, **59**, 27.1-27.62. <https://doi.org/10.1175/AMSMONOGRAPHS-D-19-0003.1> (2019).
- [123] K. Hamilton. At the Dawn of Global Climate Modeling: The Strange Case of the Leith Atmosphere Model. *History of Geo- and Space Sciences*, **11**, 93-103 [doi.org/10.5194/hgss-11-93-2020](https://doi.org/10.5194/hgss-11-93-2020) (2020).
- [124] T. Sakazaki and K. Hamilton. An Array of Ringing Global Free Modes Discovered in Tropical Surface Pressure Data. *Journal of the Atmospheric Sciences*, **77**, 2519-2539. [doi.org/10.1175/JAS-D-20-0053.1](https://doi.org/10.1175/JAS-D-20-0053.1) (2020).
- [125] Y. Kawatani, T. Hirooka, K. Hamilton, M. Fujiwara and A. Smith. Representation of the Equatorial Stratopause Semiannual Oscillation in Global Atmospheric Reanalyses. *Atmospheric Chemistry & Physics*, **20**, 9115-9133. <https://doi.org/10.5194/acp-20-9115-2020> (2020).
- [126] J. Anstey, N. Butchart, K. Hamilton and S. Osprey. The SPARC Quasi-biennial Oscillation Initiative. *Quarterly Journal of the Royal Meteorological Society*, **148**, 1455-1458. <https://rmets.onlinelibrary.wiley.com/doi/10.1002/qj.3820> (2022).
- [127] A. Bushell, J. Anstey, N. Butchart, Y. Kawatani, S. Osprey, J. Richter, F. Serva, P. Braesicke, C. Cagnazzo, C.-C. Chen, H.-Y. Chun, R. Garcia, L. Gray, K. Hamilton, T. Kerzenmacher, Y.-H. Kim, F. Lott, C. McLandress, H. Naoe, J. Scinocca, A. Smith, T. Stockdale, S. Versick, S. Watanabe, K. Yoshida and S. Yukimoto. Evaluation of the Quasi-biennial Oscillation in Global Climate Models for the SPARC QBO-initiative. *Quarterly Journal of the Royal Meteorological Society*, **148**, 1459-1489. <https://rmets.onlinelibrary.wiley.com/doi/10.1002/qj.3765> (2022).
- [128] J. Richter, N. Butchart, Y. Kawatani, A. Bushell, L. Holt, F. Serva, J. Anstey, I. Simpson, S. Osprey, K. Hamilton, P. Braesicke, C. Cagnazzo, C.-C. Chen, R. Garcia, L. Gray, T. Kerzenmacher, F. Lott, C. McLandress, H. Naoe, J. Scinocca, T. Stockdale, S. Watanabe, K. Yoshida and S. Yukimoto. Response of the Quasi-biennial Oscillation to a Warming Climate in Global Climate Models. *Quarterly Journal of the Royal Meteorological Society*, **148**, 1490-1518. <https://rmets.onlinelibrary.wiley.com/doi/10.1002/qj.3749> (2022).
- [129] T. Stockdale, Y.-H. Kim, J. Anstey, F. Palmeiro, N. Butchart, A. Scaife, M. Andrews, A. Bushell, M. Dobrynin, J. Garcia-Serrano, K. Hamilton, Y. Kawatani, F. Lott, C. McLandress, H. Naoe, S. Osprey, H. Pohlmann, J. Scinocca, S. Watanabe, K. Yoshida and S. Yukimoto. Prediction of the Quasi-biennial Oscillation with a Multi-model Ensemble of QBO-resolving Models. *Quarterly Journal of the Royal Meteorological Society*, **148**, 1519-1540. <https://rmets.onlinelibrary.wiley.com/doi/10.1002/qj.3919> (2022).

[130] J. Anstey, I. Simpson, J. Richter, H. Naoe, M. Taguchi, F. Serva, L. Gray, N. Butchart, K. Hamilton, S. Osprey, O. Bellprat, P. Braesicke, A. Bussell, C. Cagnazzo, C.-C. Chen, H.-Y. Chun, R. Garcia, L. Holt, Y. Kawatani, T. Kerzenmacher, Y.-H. Kim, F. Lott, C. McLandress, J. Scinocca, T. Stockdale, S. Versick, S. Watanabe, K. Yoshida and S. Yukimoto. Teleconnections of the Quasi-biennial Oscillation in a Multi-model Ensemble of QBO-resolving Models. *Quarterly Journal of the Royal Meteorological Society*, **148**, 1568-1592. <https://rmets.onlinelibrary.wiley.com/doi/10.1002/qj.4048> (2022).

[131] T. Sakazaki and K. Hamilton. Discovery of Quasi-stationary Equatorial Waves Trapped in Stratospheric QBO Westerly and Easterly Jets. *Journal of Geophysical Research*, **127** (1), e2021JD035670. <https://doi.org/10.1029/2021JD035670> (2022).

[132] S. Watanabe, K. Hamilton, T. Sakazaki and M. Nakano. First Detection of the Pekeris Internal Global Atmospheric Resonance: Evidence from the 2022 Tonga Eruption and from Global Reanalysis Data. *Journal of the Atmospheric Sciences*, **79**, 3027-3043. <https://doi.org/10.1175/JAS-D-22-0078.1> (2022).

*Other Refereed Publications (Book Chapters, Meeting Reports, Encyclopedia Articles)*

[133] K. Hamilton and W.J. Emery. Regional Atmospheric Forcing of Surface Temperature and Sea Level Variability in the Northeast Pacific Ocean. *El Niño North*, (W. Wooster and D. Fluharty, eds.), Washington Sea Grant Publications, pp. 22-30. (1985).

[134] K. Hamilton. Modeling Middle Atmosphere Interannual Variability. *Proceedings of the Fifth COSPAR Colloquium* (M. Teague, D. Baker and V. Papitashvili, eds.), Pergamon Press, pp. 751-757. (1994).

[135] K. Hamilton. Meteorology and Climatology, *Encyclopedia of Applied Physics*, John Wiley & Sons, volume 10, 215-237. (1994).

[136] K. Hamilton. Aspects of Mesospheric Simulation in a Comprehensive General Circulation Model. *The Upper Mesosphere and Lower Thermosphere: A Review of Experiment and Theory* (T. Killeen and R. Johnston, eds.), American Geophysical Union, *Geophysical Monographs*, **87**, 255-264. (1995).

[137] K. Hamilton. Tides. *Encyclopedia of Climate and Weather*, (S.H. Schneider, ed.) Oxford University Press, 761-764. (1996).

[138] K. Hamilton. Free and Forced Interannual Variability of the Circulation in the Extratropical Stratosphere. *Atmospheric Science Across the Stratopause* (S. Eckermann, D. Siskind and M. Summers, eds.), American Geophysical Union, *Geophysical Monographs*, **123**, 227-239. (2000).

[139] K. Hamilton. The Quasi-biennial Oscillation. *Encyclopedia of Global Environmental Change*, Volume 1, (M. MacCracken and S. Perry eds.) John Wiley and Sons, 611-613. (2001).

- [140] K. Hamilton. Middle Atmosphere Semiannual Oscillation. [\*Encyclopedia of Atmospheric Sciences\*](#), (J. Holton, J. Pyle and J. Curry eds.) Academic Press, 1336-1341. (2002).
- [141] K. Hamilton and W. Ohfuchi. Progress and Perspectives in High-Resolution Modeling. *Eos*, **87**, 176. (2006).
- [142] K. Hamilton. Numerical Resolution and Modeling of the Global Atmospheric Circulation: A Review of Our Current Understanding and Outstanding Issues. [\*High Resolution Numerical Modeling of the Atmosphere and Ocean\*](#). Springer Publishing, 8-27. (2008).
- [143] K. Hamilton. Tides. [\*Encyclopedia of Climate and Weather 2nd Edition\*](#), (S.H. Schneider and M.D. Mastrandea, eds.) Oxford University Press, volume 3, 168-171. (2011).
- [144] K. Hamilton, M.J. Alexander and K. Sato. Gravity Wave Effects on Circulation. *Eos*, **92**, 251. (2011).
- [145] K. Hamilton. Semiannual Oscillation. [\*Encyclopedia of Atmospheric Sciences 2nd Edition\*](#), (G. North, J. Pyle and F. Zhang eds.) Elsevier Publishing, 4, 26-29. (2015).
- [146] K. Hamilton, S. Osprey and N. Butchart. Modeling the Stratosphere's "Heartbeat". [\*Eos\*, \*\*96\*\*, doi:10.1029/2015E0032301](#). (2015)

### *Selected Non-Refereed Publications*

- K. Hamilton. Effects of Atmospheric Tides on the General Circulation of the Stratosphere, Mesosphere and Lower Thermosphere. [\*Middle Atmosphere Program Handbook\*, \*\*2\*\*, 246-255](#). (1981).
- K. Hamilton. Stratospheric Circulation Statistics, [\*NCAR Technical Report TN-191+STR\*](#), 174 pp.; doi:10.5065/D63B5X3Q (1982).
- K. Hamilton. Evidence for Tropical-Midlatitude Teleconnections in the Eighteenth and Nineteenth Centuries. [\*Tropical Atmosphere-Ocean Newsletter\*, \*\*30\*\*, 1-2](#). (1985).
- L. Mysak, K. Hamilton and C. Groot. [\*Year-to-Year Changes in the Return Migration Routes of Fraser River Sockeye Salmon\*](#). *Discovery*, **14**, 40-43 ([Vancouver Natural History Society/Nature Vancouver](#)) (1985).
- K. Hamilton. The Southern Oscillation and Coastal Sea Surface Temperature Variability off Oregon and Northern California. [\*Tropical Atmosphere-Ocean Newsletter\*, \*\*34\*\*, 6-7](#). (1986).

- K. Hamilton. Tropical Sea Surface Temperatures and the Stratospheric Equatorial Waves Simulated in the Canadian Climate Centre General Circulation Model. [\*Tropical Atmosphere-Ocean Newsletter\*, \*\*34\*\*, 12-14.](#) (1986).
- L. Mysak, C. Groot. and K. Hamilton. A Study of Climate and Fisheries: Interannual Variability in the Northeast Pacific Ocean and its Influence on Homing Migration of Sockeye Salmon. [\*Climatological Bulletin\*, \*\*20\*\*, 26-35.](#) (1986).
- K. Hamilton and A.M. Allingham. Synoptic-Scale Sea Level Pressure Variability in ENSO and Non-ENSO Winters. [\*Tropical Atmosphere-Ocean Newsletter\*, \*\*41\*\*, 1-2.](#) (1987).
- K. Hamilton. The Dark Day of 1819. [\*Chinook\*, \*\*9\*\*, 72-74.](#) (1987).
- K. Hamilton. A Review of Observations of the Quasi-biennial and Semiannual Oscillations of the Tropical Middle Atmosphere. [\*Transport Processes in the Middle Atmosphere\*, \(G. Visconti, ed.\), D. Riedel Publishing Co., pp. 19-29.](#) (1987).
- K. Hamilton. The Role of the Stratosphere in Modeling Tropospheric Climate. *World Meteorological Organization Technical Document #226*, pp. D1-D13. (1988).
- K. Hamilton. Book Review of "Progress in Atmospheric Physics" by R. Rodrigo et al. *Bulletin of the American Meteorological Society*, **70**, 1294-1295. (1989).
- K. Hamilton. Evaluation of the Gravity Wave Field in the Middle Atmosphere of the GFDL "SKYHI" General Circulation Model. [\*World Meteorological Organization Technical Document #273\*, pp. 264-271.](#) (1989).
- K. Hamilton. What We Can Learn From General Circulation Models About the Spectrum of Middle Atmospheric Motions. [\*Coupling Processes in the Lower and Middle Atmosphere\* \(E. Thrane, T. Blix and D. Fritts, eds.\), Kluwer Academic Publishers, pp. 161-174.](#) (1993).
- K. Hamilton. Model Simulation of the Stratospheric Penetration of the Southern Oscillation. *TOGA Notes*, **13**, 7-11. (1993).
- K. Hamilton, R.J. Wilson and H. Vahlenkamp. Three-Dimensional Visualization of the Polar Stratospheric Vortex. [\*Canadian Meteorological and Oceanographic Society Bulletin\*, \*\*22\*\*, 4-6.](#) (1994).
- K. Hamilton. The GFDL SKYHI Model: Results of Relevance for Numerical Weather Prediction. [\*The Stratosphere and Numerical Weather Prediction\*](#). European Center for Medium Range Weather Forecasts (A. Simmons, ed.), 213-231. (1994).
- K. Hamilton. Comprehensive Modeling of Vertically-Propagating Waves: Opportunities for Comparisons with Observations. *Proceedings of the Workshop on Middle Atmospheric Wind Observations*, (Publication of the Centre National d'Etudes Spatiales, Paris), 4.3-4.15. (1995).

K. Hamilton. Gravity Wave Processes and Their Parameterization in Global Models. [\*SPARC Newsletter\*, 7, 18-24](#). (1996).

K. Hamilton. Progress Towards Gravity Wave Parameterization for Global Climate Models. [\*World Meteorological Organization Technical Document #814\*](#), 295-298. (1997).

K. Hamilton. Meteorological Measurements on Ozone Sonde Ascents: A Valuable Resource for Stratospheric Climatology. [\*SPARC Newsletter\*, 9, 23](#). (1997).

K. Hamilton. The Role of Parameterized Drag in a Troposphere-Stratosphere-Mesosphere General Circulation Model. [\*Gravity Wave Processes - Their Parameterization in Global Climate Models\*, \(K. Hamilton, ed.\) Springer-Verlag, 337-350](#). (1997).

K. Hamilton. Book Review of "Gravity Currents in the Laboratory and the Environment" by J. Simpson. [\*Eos\*, 79, 71](#). (1998).

K. Hamilton. The Gravity Wave Parameterization Problem for Global Simulation Models. [\*SPARC Newsletter\*, 12, 7-14](#). (1999).

G. Roff, S. Pawson, U. Langematz, K. Hamilton, A. Scaife, T. Horinouchi, and R.J. Wilson. Systematic Errors Found in GRIPS. *Modeling Systematic Errors* (J.D. Jasper and P.J. Meighen eds.) Australia Bureau of Meteorology Research Centre Report No. 80, 167-174. (2001).

W. Randel, E. Fleming, M. Geller, M. Gelman, K. Hamilton, D. Karoly, D. Ortland, S. Pawson, R. Swinbank, P. Udelhofen. SPARC Intercomparison of Middle Atmosphere Climatologies. [\*World Meteorological Organization Technical Document #1142\*](#), 96 pp. (2002).

K. Hamilton, V. Balaji and R. Hemler. Gravity Waves Generated by Isolated Tropical Convection Simulated in a Cloud-Resolving Model. [\*Canadian Meteorological and Oceanographic Society Bulletin\*, 30, 40-44](#). (2002).

K. Hamilton. Introduction to the Dynamics of the Tropical Stratosphere. *Physics of the Equatorial Atmosphere*, Rutherford-Appleton Laboratory, 1-87. (2003).

K. Hamilton. The Darwin Area Wave Experiment (DAWEX). [\*SPARC Newsletter\*, 20, 19-21](#). (2003).

K. Hamilton. Report on the Chapman Conference on Gravity Wave Processes and Parameterization. [\*SPARC Newsletter\*, 23, 15-19](#). (2004).

K. Hamilton. Volcanos and the Weather. [\*Journal of High School Science\*, 3, 8-12](#). (2004).

K. Hamilton. Featured Commission: The International Commission on the Middle Atmosphere. [\*IAMAS Newsletter\*, #6, 3](#). (2007).

A. Sanchez-Lugo, J. Lawrimore, D. Wuerz and K. Hamilton. An Index to Measure the Influences of Climate on Residential Natural Gas Demand. [\*Proceedings of the American Meteorological Society 20th Conference on Climate Variability and Change\*, 3B,1-8](#). (2008).

M.J. Alexander, K. Hamilton, and K. Sato. Report on the Chapman Conference on Atmospheric Gravity Waves and their Effects on General Circulation and Climate. [\*SPARC Newsletter\*, 37, 18-22](#). (2011).

A. Gettleman, G. Morris, K. Hamilton, H. Selkirk and F. Hasebe. Workshop Summary: US-Japan Workshop on the Tropical Tropopause Layer. [\*IGAC Newsletter\* 48](#), 39-40. (2012).

V. Keener, K. Hamilton, S. Izuka, K. Kunkel, L. Stevens, and L. Sun. Regional Climate Trends and Scenarios for the U.S. National Climate Assessment: Part 8. Climate of the Pacific Islands. *U.S. NOAA Technical Report NESDIS 142-8*. 44 pp., National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Service, Washington, D.C. (2013).

K. Hamilton. Unique Japan-US-Hawaii Partnership Leads the Study of Asia-Pacific Climate. *Ocean Policy Research Foundation Newsletter*, #317. (2013). [English version](#); [Japanese translation](#)

A. Gettleman, K. Hamilton, G. Morris, F. Hasebe, and H. Selkirk. US-Japan Workshop on the Tropical Tropopause Layer: State of the Current Science and Future Observational Needs. [\*SPARC Newsletter\*, 40, 37-47](#). (2013).

K. Hamilton. Some Thoughts on Review Articles. Japan Geoscience Union [\*Progress in Earth and Planetary Sciences Editors' Blog\*, June 24, 2015](#). (2015).

J. Anstey, K. Hamilton, S. Osprey, N. Butchart and L. Gray. Report on the 1<sup>st</sup> QBO Modeling and Reanalysis Workshop. [\*SPARC Newsletter\*, 45, 19-25](#). (2015).

J. Anstey, S. Osprey, N. Butchart, K. Hamilton, L. Gray and M. Baldwin. Report on the SPARC QBO Workshop: The QBO and its Global Influence - Past, Present and Future. [\*SPARC Newsletter\*, 48, 33-41](#). (2017).

J. Anstey, S. Yoden, M. Geller, K. Hamilton, S. Osprey and N. Butchart. Report on the Joint SPARC Dynamics and Observations Workshop. [\*SPARC Newsletter\*, 50, 19-25](#). (2018).

K. Hamilton. James Sadler and the Discovery of the QBO. [\*SPARC Newsletter\*, 51, 32-35](#). (2018).

K. Hamilton. The Discovery of the Stratopause and Mesosphere. [\*SPARC Newsletter\*, 55, 26-30](#). (2020).

J. Anstey, N. Butchart, K. Hamilton, S. Osprey, A. Bushell, L. Holt, Y. Richter, A. Smith and T. Stockdale. Improving the QBO in Climate Models. [\*SPARC Newsletter\*, 57, 12-17](#). (2021).

K. Hamilton. How a Volcano and Flaming Red Sunsets Led an Amateur Scientist in Hawaii to Discover Jet Streams. [The Conversation](#). (also [Spanish translation](#)). (2021). [reprinted in many media sites including [Yahoo News](#), the [Seattle Post-Intelligencer](#), [Houston Chronicle](#), [St. Louis Post-Dispatch](#), [Albany Times-Union](#), [San Antonio Express-News](#), [Honolulu Civil Beat](#); Spanish translation in [El País](#). [English version of El País](#).]

K. Hamilton. Syukuro Manabe's Pioneering Contributions to Stratospheric Science. [SPARC Newsletter](#), **58**, 4-5. (2022).

K. Hamilton. Tonga Eruption was so Intense, it Caused the Atmosphere to Ring Like a Bell. [The Conversation](#). (2022). [reprinted on many media sites including [Yahoo News](#), [MSNBC](#), [The Weather Network](#), [Progressive Charlotte](#), [Counterpunch](#), [Honolulu Civil Beat](#) ; also appeared in [a German translation](#) .]

K. Hamilton. Pumice Rafts from Submarine Volcanos are being Tracked Using Determinations of Ocean Currents. [Breakthrough](#), July 21, 2022.

K. Hamilton. Early Exploration of the High Latitude Stratosphere Part I: Pre-World War II Era. [Canadian Meteorological and Oceanographic Society Bulletin](#), August 18, 2022.

K. Hamilton. Early Exploration of the High Latitude Stratosphere Part II: Discovery of the Polar Night Jet Stream. [Canadian Meteorological and Oceanographic Society Bulletin](#), August 23, 2022.

K. Hamilton. Ghost Islands of the Arctic: The World's "Northern-Most Island" isn't the First to be Erased from the Map. [The Conversation](#). September 8, 2022. [reprinted on many media sites including [Newsweek](#), [MSNBC](#), [Yahoo News](#), [Counterpunch](#), [San Francisco Times](#), [New Haven Register](#), [Seattle Post-Intelligencer](#), [Arctic Today](#), [IFL Science](#), [Lebanon Express](#)]

K. Hamilton. In 1931, Scientists Hunted Ghost Islands in the Arctic with a Zeppelin. [Atlas Obscura](#). September 13, 2022. [modified version of my September 8 article originally published in [The Conversation](#)]

K. Hamilton. High-Level Winds Make Hawaii a Likely Target for Balloon Surveillance. [Honolulu Civil Beat](#), April 2, 2023.

K. Hamilton. A Remarkable Novel that Predicted Today's Tech-fueled Anxieties 90 Years Ago. [The Academic](#), June 9, 2023.