KAREN HEPLER ROSENLOF

EDUCATION

Ph.D.	1994	University of Washington	(Atmospheric Sciences)
M.S.	1984	Colorado State University	(Atmospheric Science)
B.S.	1982	University of California at Davis	(Atmospheric Science)

EMPLOYMENT EXPERIENCE

4/99-	Meteorologist, Chemistry and Climate Processes Group (Program Leader) Meteorological Chemistry Group (through 12/07) NOAA Aeronomy Laboratory, Boulder, Colorado (through 9/05) NOAA ESRL, Chemical Sciences Division, Boulder, Colorado (10/05-present) Senior Scientist for Climate and Climate Change (4/16-present)
6/94-4/99	Research Associate, CIRES, University of Colorado/NOAA Aeronomy Laboratory, Boulder, Colorado.
9/89-6/94	Graduate Research Assistant, Department of Atmospheric Sciences, University of Washington, Seattle, Washington (advisor: J. R. Holton).
12/84-6/89	Professional Research Assistant, Laboratory for Atmospheric and Space Physics, University of Colorado, Boulder, Colorado.
8/82-11/84	Graduate Research and Teaching Assistant, Department of Atmospheric Science, Colorado State University, Fort Collins, Colorado (advisor D. E. Stevens).
6/81-8/82	Meteorologist Intern, NWS, Weather Service Forecast Office, Redwood City, California.
6/80-3/81	Student Trainee, NWS, CA/NV River Forecast Center, Sacramento, California.
6/79-5/80	Student Intern, California Air Resources Board, Emissions Inventory section, Sacramento, California.

AWARDS

- Fellow of the American Geophysical Union, elected Dec 2023
- NASA Group Achievement Award, ACCLIP Science Team, 2023
- Department of Commerce Silver Medal “for successfully executing a rapid response campaign to study the atmospheric impact of the unprecedented Hunga Tonga-Hunga Ha’apai volcano eruption” awarded to Karen Rosenlof, Troy Thornberry, Steve Ciciora, Ru-Shan Gao, Bryan Johnson, Gary Morris, and Alice Crawford, 2023
- Group Achievement Award, ATom Science Team, 2019
- NASA Group Achievement Award, ATom Science Team, 2019
- NASA Group Achievement Award, POSIDON Science Team, 2017
- Yoram J. Kaufman Unselfish Cooperation in Research Award (AGU), 2016
- NASA Group Achievement Award, ATTREX Science Team, 2016
- NASA Group Achievement Award, SEAC^{4}RS Science Team, 2014
- Fellow of the American Meteorological Society, elected Feb 2014
- NOAA Bronze Award, "for the successful demonstration of the Global Hawk Unmanned Aircraft Systems for NOAA's Climate Goal" awarded to David Fahey, Steven Ciciora, Richard McLaughlin, RuShan Gao, Karen Rosenlof, Bradley Hall, and James Elkins, 2013
- NASA Group Achievement Award, MACPEX Science Team, 2012
- NASA Group Achievement Award, GloPac Science Team, 2011

- NASA Group Achievement Award, ARCTAS Science Team, 2009
- NASA Group Achievement Award, TC-4 Science Team, 2008
- NOAA Bronze Award, "for demonstrating the usefulness of unmanned aircraft systems in accomplishing NOAA's mission, including operation and research goals" awarded to James Churnside, James Elkins, David Fahey, Albin Gasiewski, Samuel Oltmans, Karen Rosenlof, and Sara Summers, 2007
- NASA Group Achievement Award, UARS Team, 2006
- NASA Group Achievement Award, CRYSTAL-FACE Science Team, 2003
- NASA Group Achievement Award, CAMEX 4 Science Team, 2002
- Clarence Leroy Meisinger Award, American Meteorological Society, 2000, "for outstanding observational and theoretical analysis of the stratospheric circulation and trace constituent transport."
- NOAA/ERL Outstanding Paper Award, 1998, 2001, 2011
  2011: Murphy, D. M., S. Solomon, R. W. Portmann, K. H. Rosenlof, P. M. Forster, and T. Wong (2009), An observationally based energy balance for the Earth since 1950, J. Geophys. Res., 114, D17107, doi:10.1029/2009JD012105.
  2001: Oltmans, S. J., H. Vömel, D. J. Hofmann, K. H. Rosenlof, D. Kley, 2000: The increase in stratospheric water vapor from balloonborne, frostpoint hygrometer measurements at Washington, D.C., and Boulder, Colorado Geophys. Res. Lett., 2, 3453-3457.
  1998: Rosenlof, K. H., A. F. Tuck, K. K. Kelly, J. M. Russell III, M. P. McCormick, 1997: Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere, J. Geophys. Res., 102, 13213-13234. (ASHOE/MAESA special section)
- NASA Group Achievement Award, POLARIS Project Team, 1997
- Travel award to attend SPARC conference in Melbourne Australia, Dec. 1996
- Travel award to attend NATO ASI, "The Stratosphere and its Role in the Climate System" in Val Morin, Quebec, Canada, Sept. 1-15, 1995
- State of Colorado Graduate Fellowship, 1983
- Henry Jastro Fellowship (U.C. Davis), 1982
- Phi Kappa Phi Honor Society, 1981

LEADERSHIP POSITIONS

- SABRE Experiment, WB-57 aircraft experiment, Flight planning lead scientist, 2022 & 2023
- SPARC/APARC co-chair, term is Jan 2022- Dec 2025
- SPARC Water Vapour Assessment-II (WAVAS II) co-leader; 2008-present
- POSIDON Experiment, WB-57F aircraft experiment, Flight planning lead scientist, 2016
- VIRGAS Experiment, WB-57F aircraft experiment, Flight planning lead scientist, 2015
- SEAC^{4}RS Experiment, multi-aircraft, Leadership team member, 2013
- NOAA-Water Experiment, WB-57F aircraft experiment, Lead scientist, 2005
- SPARC water vapor assessment II (WAVAS II) co-leader; 2008-present
- Chair of the AMS Middle Atmosphere STAC Committee (2004-2007)
- SPARC Water Vapour Assessment Chapter 2 coordinating lead author, 1998-2000

SCIENCE TEAM PARTICIPATION

- Multi-aircraft experiments: TC^4 (2007), SEAC^{4}RS (2013), ACCLIP (2021/2022)
- DC-8 aircraft experiment: ATom (2017 & 2018)
- ER-2 aircraft experiments: ASHOE/MAESA (1994), POLARIS (1997), CAMEX-4 (2001)

- WB-57F aircraft experiments: WAM (1998), ACCENT I&II (1999, 2000), CRYSTAL-FACE (2002), Pre-AVE (2004), AVE (2004), AVE (2005), TCSP (2005, theory), NOAA-Water Experiment, lead scientist (2005), CR-AVE (2006), MACPEX (2011), VIRGAS (2015), POSIDON (2016), SABRE (2022-2025)
- NOAA UAS Flight Demonstration Project 2005
- NOAA P-3 aircraft experiment: flight planning lead ARCPAC (2008), (in conjunction with NASA ARCTAS)
- NCAR G-5 aircraft experiments: START-08 (2008), HIPPO (2009-2011)
- Satellite experiments: HALOE (1994-2002), SAGE-II (1994-1997), Aura (2008- 2011), SAGE III/ISS (2019-present)
- Global Hawk: GloPac (2010), ATTREX (2011 - 2014), ENRR (2016)
- NOAA UAS instrument intercomparison with PMEL Manta aircraft (2014)
- Small UAS: NightFOX (flights in 2019, testing started in 2018)
- Balloon, AEROMARINE (Reunion Island, 2016), B^2SAP (2020-present), TR^2Ex (2022)

ACTIVITIES & PROFESSIONAL SERVICE

- Co-convener, Session on Aerosol Processes (2024 AMS Middle Atmosphere Conference)
- Served as a scientific expert on SAI at the Wilson Center's Arctic Solar Radiation Management Tabletop Exercise, Washingon DC, Aug 2024
- Member AIAA Space Exploration Integration Committee
- Member AGU Atmospheric Sciences Fellows Committee (AGU) 2024-2026
- Member NOAA Research & Development Enterprise Committee (RDEC)
- Member AIAA Community of Interest "Sustainable Space"
- Co-Convenor, Panel on EXPL-20: Impact of Space Endeavors on Earth's Climate and Atmosphere at AIAA SciTech 2023.
- Co-convener, AMS session on upper troposphere/lower stratosphere (2023 Annual meeting)
- Review panel member for the Deutsche Forschungsgemeinschaft (DFG) Priority Programme Atmospheric and Earth System Research with the 'High Altitude and Long-Range Research Aircraft' (HALO) – SPP 1294/5, March 2023 in Bonn.
- Coordinated TR^2Ex, a stratospheric balloon measurement campaign rapidly responding to the Tonga volcanic eruption, measurements based on Reunion Island
- Member, ACOM Science Advisory Board (NCAR)
- Proposal review committee for HPCC Incubator RFPs, 2022 (NOAA)
- Member, Scientific Merit Review Panel for SCOPEX (Harvard University) 2022
- Member, Advisory Board, CLDERA project (Sandia National Laboratory) 2022-2025
- Review Editor & Contributing Author, 2022 UNEP/WMO Scientific Assessment of Ozone Depletion
- Co-Author, 20 Q&As; 2022 UNEP/WMO Scientific Assessment of Ozone Depletion
- Co-convener, AMS session on stratospheric aerosol injection (in Weather Mod conference at 2022 Annual Meeting)
- Co-convener, AGU session on stratospheric aerosols (2021)
- Co-organizer (with Yaga Richter) of 2021 GMRC Lightning Talks, Session 5 "Observational needs to improve modeling of stratospheric aerosols" Oct 21 2022
- Co-organizer (with David Keith) of 2021 GMRC Lightning Talks, Session 2 "Modeling Ice Albedo Modification": March 3, 2021
- Co-organizer (with Simone Tilmes and Brian Medeiros) of CCIS Webinar, September 22, 2021: Implementation and Engineering: SRM
- Review panel member for the NASA Science of Terra, Aqua, Suomi NPP, and JPSS : AtmChem/UARP Virtual Panel, May 11-13, 2021

- Proposal review committee for HPCC Incubator RFPs, 2021 (NOAA)
- Member of the organizing committee for OAR-NWS Subject Matter Expert Workshop (workshop in Feb 2021)
- Review panel member for the Deutsche Forschungsgemeinschaft (DFG) Priority Programme Atmospheric and Earth System Research with the 'High Altitude and Long-Range Research Aircraft' (HALO), February 5, 2021, Remote (WebEx)
- Member Community Climate Intervention Strategies (CCIS) webinars and workshop organizing committee, 2020 – present (primary organizer for Observations Webinar)
- Steering Committee member, Geoengineering Modeling Research Consortium (GMRC), 2019-2021)
- International Space Science Institute (ISSI) Team member, Tropical Width Impacts On The Stratosphere (TWIST), 2021-2022
- MUSICA Physics, Transport, sub-scale Processes advisory panel (NCAR) (2019-present)
- Selection Panel Member, Yorum J. Kaufman award (AGU) 2019-2021
- Member of the Stratosphere-Troposphere Processes and their Role in Climate (SPARC) Scientific Steering Group (SPARC is a core project of the World Climate Research Program (WCRP), 2019-2021, Co-chair 2022-2025.r
- Organizing Committee, Solomon Symposium (at the 2020 AMS Annual Meeting)
- Review panel member for the Deutsche Forschungsgemeinschaft (DFG) Priority Programme Atmospheric and Earth System Research with the 'High Altitude and Long-Range Research Aircraft' (HALO) – SPP 1294/5, February 2019, Berlin
- Co-Convener (with P. Newman) for ozone session at 2019 AMS Annual Meeting (note, the meeting occurred during the 2018/19 government shutdown, so I was unable to attend, but the session went on as planned prior to Dec 22, with a number of people substituting for NOAA and NASA employees)
- Primary Convener for stratospheric ozone session at 2018 AGU Fall Meeting (w/Daniel, Banerjee & Strahan)
- Co-Convener (with G. Stiller) for special session on Water Vapor observations at 2018 EGU
- Editor (with Russell, Buehler & Stiller) for ACP/AMT/ESSD inter-journal Special Issue on Water vapour in the upper troposphere and middle atmosphere: a WCRP/SPARC satellite data quality assessment including biases, variability, and drifts
- Education outreach at Liceo María Auxiliadora (girl's high school in Punta Arenas Chile) described ATom science to 2 high school classes, May 8, 2018
- External review committee for the Helmholtz Association, Karlsruhe Institute of Technology Earth and Environment program (October 2017)
- External review committee for the Helmholtz Association, Forschungszentrum Juelich (FZJ), Earth and Environment program (October 2017)
- Selection Committee, NOAA PECASE awards, 2017
- Co-Convener (with T. Thornberry and R. Ueyama) for session on UTLS observations and modeling at 2017 AGU
- Member of the organizing committee, OAR Forums: Atmospheric Chemistry/Air Composition and Ecosystem Modeling, held June 15-June 16, 2017 in Silver Spring, Md.
- Reviewer for the 2016 OAR Scientific Paper Awards
- US CLIVAR Working Group on the Changing Width of the Tropical Belt, 2016-2017
- International Space Science Institute (ISSI) Team member, Tropical Width Diagnostics Comparison Project, 2017-2018
- Chapter author, 2018 UNEP/WMO Scientific Assessment of Ozone Depletion

- Co-convener (with I. Petropavlovskikh, T. Leblanc, D. Hurst) for session on uncertainties in long-term records of ECVs, Fall AGU, 2015
- NASA Langley Science Directorate External Review Panel Member 2015
- NOAA GRUAN Coordination Committee 2015 & 2016
- Contributing author of the CrIS Atmospheric Chemistry Data User's Workshop Report 2014
- SI^2N Activity member (assessment of stratospheric ozone trends) 2013-2014
- Rapporteur for "Stratospheric composition", and a coauthor of that section of the report resulting from the NASA "Outstanding Questions in Atmospheric Composition, Chemistry, Dynamics and Radiation for the Coming Decade" workshop held at NASA Ames Research Center, Mountain View, CA, May 6-9 2014.
- Member ad hoc SPARC committee on the need to continue vertically resolved stratospheric measurements for ozone and climate studies (2014)
- Lead author of the GRUAN Report #3, Outcomes of the GRUAN Network Expansion Workshop, finalized in August 2014
- Advisory Board Member, ESA SPARC Initiative (SPIN)
- Instructor; U.S. - Japan Bilateral Workshop on the Tropical Tropopause Layer: State of the Current Science and Future Observational Needs, Oct 2012
- Reviews for 2011 Office of Atmospheric and Oceanic Research (OAR) Outstanding Scientific Paper Awards
- Expert reviewer for Chapter 2 FOD and SOD, IPCC AR5
- External review panel for the SHARP Program (German stratospheric research program, in Berlin, March 2012)
- Reviewer for SPARC Data Initiative, Dec 2011
- Session co-organizer for parallel session for the WCRP 2011 meeting
- Session co-organizer for water vapor poster cluster at the WCRP 2011 meeting
- Co-Convener (with S. Davis) for special session on tropical extent at Fall AGU (2010)
- Lead Author, 2010 Ozone Assessment (Chapter 4)
- Instructor, Cargese International School, Water Vapour in the Climate System, Sept. 2009
- NOAA ESRL CSD seminar coordinator, September 2006-August 2008
- ACCRI SSWP Workshop (and proposal review committee), 2007/2008
- ICAO CAEP Impacts Workshop, Montreal, 29-31 October 2007
- Chapman Water Vapor Conference organizing committee (meeting in fall 2008)
- Chair of the AMS Middle Atmosphere STAC Committee (member 01-07, chair 04-07)
- Contributing author: 2006 Ozone Assessment
- Contributing author: 2007 IPCC AR4
- 14th AMS Middle Atmosphere Conference program committee
- Aura water vapor validation subcommittee, chair, 2005 & 2006
- Participant at the Workshop on the Impacts of Aviation on Climate Change, June 7-9, 2006, Boston, MA (listed as a contributing author on the final report)
- 13th AMS Middle Atmosphere Conference program committee, Chair (2005)
- Nominating committee appointed by the AGU Atmospheric Sciences President, 2004-2006
- Nominating committee for the AMS Bernhard Haurwitz Memorial Lecturer, 2003 - 2006
- External Review Committee for the NRL Battlespace Environments (Atmospheric Physics) Research Program (April 2003)
- Rapporteur at the Joint SPARC-IGAC Workshop on Climate-Chemistry Interactions (2003)
- 12th AMS Middle Atmosphere Conference program committee (2002)
- Co-Convener (with R. Friedl and M. Ross) for ACCENT special session at Fall AGU (2001)
- NOAA Outstanding Paper Awards review committee (2000)

- AMS Committee on Middle Atmosphere (2001-2007, chair 2004-2007)
- AGU Atmospheric Dynamics sub-committee member (1999-2005)
- SPARC Water Vapor Assessment, Chapter 2 coordinating lead author (1998-2000)
- NRC Panel on the Atmospheric Effects of Aviation (PAEAN) (1998-1999)
- Second Chapman Conference on Water Vapor in the Climate System program committee (1999)
- Co-organizer for the UW Dept. of Atm. Sciences Research Orientation Seminars, 1992/93
- Organizer for the UW Dept. of Atmospheric Sciences Teaching Award, 1992
- Secretary/Treasurer, CSU American Meteorological Society chapter, 1983/84
- President, Atmospheric Sciences Student Group, UC Davis, 1981/82

PROFESSIONAL SOCIETIES

American Meteorological Society, member since 1980.
American Geophysical Union, member since 1988.

STUDENT AND POST-DOC INVOLVEMENT

Member of Jeff Hicke's (CU, PAOS), Ryan Neely's (CU, ATOC), Adriana Raudzens-Bailey's (CU, ATOC), Wei Yuan's (SOMAS, Stony Brook) & Pengfei Yu's PhD committees
Advised Matthew Phillips, undergraduate PHASE student for 2 years.
Advised David Hergeshiemer, STEM Teacher and Researcher (STAR) program (2015)
PROGRESS mentor (advising undergraduate female STEM students) 2016-2018
Co-advised SOARS student, Ekaterina Lezine 2018 & 2019
External examiner, PhD thesis committee for Dan Weaver, University of Toronto, 2018.
Post-Doc advisor: Sean Davis, Ryan Neely, Stephanie Evan, Pengfei Yu, Antara Banerjee, Yunqian Zhu
Post-Doc co-advisor: Paul Young, Irina Mahlstein, Erik Larson, Nicholas Davis, Christopher Maloney, Yue Jia, Ewa Bednarz

PEER REVIEWED PUBLICATIONS (Researcher ID: B-5652-2008) (*>50 citations, #>100, &>500))

1) Rosenlof, K.H., D.E. Stevens, J.R. Anderson, P.E. Ciesielski, 1986: The Walker Circulation with observed winds, a mean Hadley cell, and cumulus friction. J. Atmos. Sci., 43,449-467.
2) Thomas, R.J., K.H. Rosenlof, R.T. Clancy, J.M. Zawodny, 1988: Stratospheric NO_2 over Antarctica as measured by the Solar Mesosphere Explorer during Austral spring, 1986. J. Geophys. Res., 93, 12561-12568.
3) Rosenlof, K. H., R. J. Thomas, 1990: Five-day mesospheric waves observed in Solar Mesosphere Explorer ozone, J. Geophys. Res., 95, 895-899.
4)# Rosenlof, K. H., J. R. Holton, 1993: Estimates of the stratospheric residual circulation using the downward control principle. J. Geophys. Res., 98, 10465-10479 (172)
5)# Rosenlof, K. H., 1995: The seasonal cycle of the residual mean meridional circulation in the stratosphere, J. Geophys. Res., 100, 5173-5191. (325)
6)* Mote, P. W., K. H. Rosenlof, J. R. Holton, R. S. Harwood, J. W. Waters, 1995: Seasonal variations of water vapor in the tropical lower stratosphere, Geophys. Res. Letters, 22,1093-1096. (84)
7)& Mote, P. W., K. H. Rosenlof, M. E. McIntyre, E. W. Carr, J. C. Gille, J. R. Holton, J. S. Kinnersley, H. C. Pumphrey, J. M. Russell III, J. W. Waters, 1996: An atmospheric tape recorder: the imprint of tropical tropopause temperatures on stratospheric water vapor, J. Geophys. Res., 101, 3989-4006. (568)
8)# Appenzeller, C., J. R. Holton, K. H. Rosenlof, 1996: Seasonal variation of mass transport across the tropopause, J. Geophys. Res., 101, 15071-15078. (282)

9) Rosenlof, K. H., 1996, Summer hemisphere differences in temperature and transport in the lower stratosphere, J. Geophys. Res., 101, 19129-19136.
10) Fahey, D. W., S. G. Donnelly, E. R. Keim, R. S. Gao, R. C. Wamsley, L. A. Del Negro, E. L. Woodbridge, M. H. Proffitt, K. H. Rosenlof, M. K. W. Ko, D. K. Weisenstein, C. J. Scott, C. Nevison, S. Solomon, K. R. Chan, 1996: In-situ observations of NOy, O_3, and the NOy/O_3 ratio in the lower stratosphere, Geophys. Res. Letters, 23, 1653-1656.
11)* Alexander, M. J., K. H. Rosenlof, 1996: Non-stationary gravity wave forcing of the stratospheric zonal mean wind, J. Geophys. Res., 101, 23465-23474. (76)\
12)* Tuck, A. F., D. Baumgardner, K. R. Chan, J. E. Dye, J. W. Elkins, B. L. Gary, S. J. Hovde, K. K. Kelly, M. Loewenstein, R. D. May, J. R. Podolske, M. H. Proffitt, K. H. Rosenlof, W. L. Smith, C. R. Webster, J. C. Wilson, 1997: The Brewer Dobson circulation in the light of high altitude in-situ aircraft observations, Q. J. R. Meteorol. Soc., 123, 1-69. (89)
13)# Rosenlof, K. H., A. F. Tuck, K. K. Kelly, J. M. Russell III, M. P. McCormick, 1997: Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere, J. Geophys. Res., 102, 13213-13234. (191)
14) Keim, E. R., M. Loewenstein, J. R. Podolske, D. W. Fahey, R. S. Gao, E. L. Woodbridge, R. C. Wamsley, S. G. Donnelly, L. A. Del Negro, C. D. Nevision, S. Solomon, K. H. Rosenlof, C. J. Scott, M. K. W. Ko, D. Weisenstein, and K. R. Chan, 1997: Measurements of the NOy-N_2O correlation in the lower stratosphere: Latitudinal and seasonal changes and model comparisons, J. Geophys. Res., 102, 13193-13212.
15)* Gettelman, A., J. R. Holton, K. H. Rosenlof, 1997: Mass fluxes of 0_3, CH4, N_20 and CF_2Cl_2 in the lower stratosphere calculated from observational data, J. Geophys. Res., 102, 19149-59, doi: 10.1029/97JD01014. (76)
16)* Donaldson, D. J., G. J. Frost, K. H. Rosenlof, A. F. Tuck, V. Vaida, 1997: Atmospheric radical production by excitation of vibrational overtones via absorption of visible light Geophys. Res. Lett., 24, 2651 -2654. (93)
17) Sandor, B.J, W.G. Read, J.W. Waters, K.H. Rosenlof, 1998: Seasonal behavior of tropical to mid-latitude upper tropospheric water vapor from UARS MLS, J. Geophys. Res., 103, 25935-25947.
18) Herman, R. L., D. C. Scott, C. R. Webster, R. D. May, E. J. Moyer, F. J. Salawitch, Y. L. Yung, G. C. Toon, B. Sen, J. J. Margitan, S. J. Oltmans, K. H. Rosenlof, H. A. Michelsen, J. W. Elkins, 1998: Tropical entrainment timescales inferred from stratospheric N_2O and CH_4 observations, Geophys. Res. Lett., 25, 2781-2784.
19)* Flocke, F., R. L. Herman, R. J. Salawitch, E. Atlas, C. R. Webster, S. M. Schauffler, R. A. Lueb, R. D. May, E. J. Moyer, K.H. Rosenlof, D.C. Scott, D.R. Blake, T.P. Bui, 1999: An examination of chemistry and transport processes in the tropical lower stratosphere using observations of long-lived and short-lived compounds obtained during STRAT and POLARIS, J. Geophys. Res., 104, 26625-26642. (50)
20)# Ray, E. A, F. L. Moore, J. W. Elkins, G. S. Dutton, D. W. Fahey, A. Andrews, K. A. Boering, H. Vömel, S. J. Oltmans, K. H. Rosenlof, P. A. Newman, 1999: Transport into the Northern Hemisphere lowermost stratosphere revealed by in-situ tracer measurements, J. Geophys. Res., 104, 26565-26580. (POLARIS special section) (111)
21) Rosenlof, K. H., 1999: Estimates of the seasonal cycle of mass and ozone transport at high northern latitudes, J. Geophys. Res., 104, 26511-26523. (POLARIS special section)
22)# Oltmans, S. J., H. Vömel, D. J. Hofmann, K. H. Rosenlof, D. Kley, 2000: The increase in stratospheric water vapor from balloonborne, frostpoint hygrometer measurements at Washington, D.C., and Boulder, Colorado Geophys. Res. Lett., 2, 3453-3457. (183)
23)# Rosenlof, K.H., S. J. Oltmans, D. Kley, J.M. Russell III, E-W. Chiou, W.P. Chu, D. G. Johnson, K.K. Kelly, H.A. Michelsen, G.E. Nedoluha, E.E. Remsberg, G.C. Toon, M.P. McCormick, 2001: Stratospheric water vapor increases over the past half century, Geophys. Res. Lett., 28,1195-1199. (224)

24) Rosenlof, K. H., 2002: Transport changes inferred from HALOE water and methane measurements, J. Met. Soc. Japan, 80(4B), 831-848.
25) Gao, R-S, P. J. Popp, E. A. Ray, K. H. Rosenlof, M. Northway, D. W. Fahey, A. F. Tuck, C. R. Webster, D. Hurst, S. Schauffler, H. Jost, T. P. Bui, 2002: The role of NOy as a diagnostic of small-scale mixing in a denitrified polar vortex, J. Geophys. Res., 107, No. D24, 4794, doi:10.1029/2002JD002332.
26)* Alexander, M. J., K. H. Rosenlof, 2003: Gravity wave forcing in the stratosphere: Observational constraints from UARS and implications for parameterization in global models, J. Geophys. Res., 108, No. D19, 4597, doi:10.1029/2003JD003373. (56)
27) Richard, E. C., K. C. Aikin, E. A. Ray, K. H. Rosenlof, T. L. Thompson, A. Weinheimer, D. Montzka, D. Knapp, B. Ridley, A. Gettelman, 2003: Large-scale equatorward transport of ozone in the subtropical lower stratosphere, J. Geophys. Res., 108, No. D23, 4714, doi: 10.1029/2003JD3003884.
28) Ray, E. A., K. H. Rosenlof, E. Richard, D. Parrish and R. Jakoubek, 2004: Distributions of ozone in the region of the subtropical jet: An analysis of in situ aircraft measurements, J. Geophys. Res., 10.1029/2003JD004143.
29) Rosenlof, K. H., 2003: How water enters the stratosphere, Science, 302, 1691-1692. (49)
30)* Gao, R. S., P. J. Popp, D. W. Fahey, T. P. Marcy, R. L. Herman, E. M. Weinstock, D. G. Baumgardner, T. J. Garrett, K. H. Rosenlof, T. L. Thompson, P. T. Bui, B. A. Ridley, S. C. Wofsy, O. B. Toon, M. A. Tolbert, B. Kärcher, Th. Peter, P. K. Hudson, A. J. Weinheimer, A. J. Heymsfield, 2004: Evidence that nitric acid increases relative humidity in low-temperature cirrus clouds, Science, 303,516-520. (94)
31)* Marcy, T. P., D. W. Fahey, R. S. Gao, E. C. Richard, T. L. Thompson, K. H. Rosenlof, E. A. Ray, R. J. Salawitch, C. S. Atherton, D. J. Bergmann, B. A. Ridley, A. J. Weinheimer, M. Loewenstein, E. M. Weinstock and M. J. Mahoney, 2004: Quantifying stratospheric ozone in the upper troposphere using in situ measurements of HCl, Science, 304, 261-265. (52)
32) Ray, E.A, K.H. Rosenlof, E. C. Richard, P. K. Hudson, D. J Cziczo, M. Loewenstein, H. J. Jost, J. Lopez, B. Ridley, A. Weinheimer, D. Montzka, D. Knapp, S.C. Wofsy, B.C. Daube, C. Gerbig, I. Xueref, R.L. Herman, 2004: Evidence of the effect of summertime midlatitude convection on the subtropical lower stratosphere: An analysis of tracer measurements from the CRYSTAL-FACE mission, J. Geophys. Res., 109, D18304, doi:10.1029/2004JD004655.
33)# Randel, W. J., F. Wu, S. J. Oltmans, K. Rosenlof, G. E. Nedoluha, 2004: Interannual Changes of Stratospheric Water Vapor and Correlations with Tropical Tropopause Temperatures. J. Atmos. Sci., 61, 2133–2148. (201)
34)* Gettelman A, E. M. Weinstock, E. J. Fetzer, F. W. Irion, A. Eldering, E. C. Richard, K. H. Rosenlof, T. L. Thompson, J. V. Pittman, C. R. Webster, R. L. Herman, 2004: Validation of Aqua satellite data in the upper troposphere and lower stratosphere with in situ instruments, Geophys. Res. Lett., 31, L22107, doi:10.1029/2004GL020730. (75)
35)* Jensen E.J., J.B. Smith, L. Pfister, J.V. Pittman, E.M. Weinstock, D.S. Sayres, R.L. Herman, R.F. Troy, K.H. Rosenlof, T.L Thompson, A.M. Fridlind, P.K. Hudson, D.J. Cziczo, A.J. Heymsfield, C. Schmitt, J.C. Wilson, 2005: Ice supersaturations exceeding 100% at the cold tropical tropopause: implications for cirrus formation and dehydration, Atm. Chem. Phys. 5, 851-862. (82)
36) Popp P.J., T.P. Marcy, E.J. Jensen, B. Karcher, D.W. Fahey, R-S. Gao, T.L. Thompson, K.H. Rosenlof, E.C. Richard, R.L. Herman, E.M. Weinstock, J.B. Smith, R.D. May, H. Voemel, J.C. Wilson, A.J. Heymsfield , M.J. Mahoney, A.M. Thompson, 2006: The observation of nitric acid-containing particles in the tropical lower stratosphere, Atm. Chem. Phys., 6, 601-611.

37) Gao, R.-S, D. W. Fahey, P. J. Popp, T. P. Marcy, R. L. Herman, E. M. Weinstock, J. B. Smith, D. S. Sayres, J. V. Pittman, K. H. Rosenlof, T. L. Thompson, P. T. Bui, D. G. Baumgardner, B. E. Anderson, G. Kok, A. J. Weinheimer, 2006: Measurements of relative humidity in a persistent contrail, Atm. Environ., 40, 1590-1600.

38) Richard, E.C., A. F. Tuck, K.C. Aikin, K.K. Kelly, R.L. Herman, S.J. Hovde, K.H. Rosenlof, T.L. Thompson, E.A. Ray, 2006: High-resolution airborne profiles of CH_4, O_3 and water vapor near tropical Central America in late January to early February 2004, J. Geophys. Res., 111, D13304, doi:10.1029/2005JD006513.

39)# Schwarz, J.P., R-S Gao, D.W. Fahey, D.S. Thompson, L.A. Watts, J.C. Wilson, J.M. Reeves, M. Darbeheshti, D.G. Baumgardner, G.G. Kok, S.H Chung, M. Schulz, J. Hendricks, A. Lauer, B. Karcher, J.G. Slowik, K.H. Rosenlof, T.L. Thompson, A.O. Langford, M. Loewenstein, K.C. Aikin, 2006: Single-particle measurements of midlatitude black carbon and light-scattering aerosols from the boundary layer to the lower stratosphere, J. Geophys. Res., 111, D16207, doi:10.1029/2006JD007076. (473)

40) Fahey, D.W., J.H. Churnside, J.W. Elkins, A.J. Gasiewski, K.H. Rosenlof, S. Summers, M. Aslaksen, T.A. Jacobs, J. D. Sellars, C. D. Jennison, L. C. Freudinger, and M. Cooper, 2006: Altair Unmanned Aircraft system achieved demonstration goals, EOS, Transactions, American Geophysical Union, 87, 20, (May), Page 197 & 201.

41) Ray, E.A., and K. H. Rosenlof, 2007: Hydration of the upper troposphere by intense tropical storms, J. Geophys. Res., 112, Issue D12, D12311, doi: 10.1029/2006JD008009.

42) Thorton, B., D.W. Toohey, A.F. Tuck, J.W. Elkins, S.J. Hovde, M.J. Mahoney, E.C. Richards, K.H. Rosenlof, T.L. Thompson, K.K. Kelly and J.C. Wilson, 2007: Chlorine Activation near the Midlatitude Tropopause, J. Geophys. Res., 112, D18306, doi:10.1029/2006JD007640.

43)# Read, W.G., A. Lambert, J. Bacmeister, R.E. Coeld, L.E. Christensen, D.T. Cuddy, W.H. Daer, B.J. Drouin, E. Fetzer, L. Froidevaux, R. Fuller, R. Herman, R.F. Jarnot, J.H. Jiang, Y.B. Jiang, K. Kelly, B.W. Knosp, L.J. Kovalenko, N.J. Livesey, H.-C. Liu, G.L. Manney, H.M. Pickett, H.C. Pumphrey, K. H. Rosenlof, X. Sabounchi, M.L. Santee, M. Schwartz, W.V. Snyder, P.C. Stek, H.Su, L L. Takacs, R.P. Thurstans, H. Voemel, P.A. Wagner, J.W. Waters, C.R. Webster, E.M. Weinstock, D.L.Wu, 2007: Aura Microwave Limb Sounder Upper Tropospheric and Lower Stratospheric H_2O and RHi Validation, J. Geophys. Res., 112, D24S35, doi:10.1029/2007JD008752. (188)

44)# Rosenlof, K.H. and G. C. Reid, 2008: Trends in the temperature and water-vapor content of the tropical lower stratosphere: The sea-surface connection, J. Geophys. Res., 113, D06107, doi:10.1029/2007JD009109. (107)

45) Rosenlof, K.H. and G. C. Reid, 2009: Reply to comment by John R. Lanzante on "Trends in the temperature and water vapor content of the tropical lower stratosphere: Sea surface connection", J. Geophys. Res., 114, D12105, doi:10.1029/2008JD011265.

46)# Murphy, D.M., S. Solomon, R.W. Portmann, K.H. Rosenlof, P.M Forster, T. Wong, 2009: An observationally based energy balance for the Earth since 1950, J. Geophys. Res., 114, D17107, doi:10.1029/2009JD012105. (152)

47) Dall'Amico, M, P.A. Stott, A.A. Scaife, L.J. Gray, K.H. Rosenlof, A.Y. Karpechko, 2010: Impact of stratospheric variability on tropospheric climate change, Climate Dynamics, 34, 399-417, doi:10.1007/s00382-009-0580-1.

48) Dall'Amico, M., L.J. Gray, K.H. Rosenlof, A.A. Scaife, K.P. Shine, P.A. Stott, 2010: Stratospheric temperature trends: impact of ozone variability and the QBO, Climate Dynamics, 34, 381-398, doi:10.1007/s00382-009-0604-x.

49) Karpechko, A.Y., N. P. Gillett, B. Hassler, K. H. Rosenlof, and E. Rozanov, 2010: Quantattive assessment of O_3 in chemistry-climate model simulations, Atm. Chem. Phys., 10, 1385-1400.

50)& Solomon, S., K. H. Rosenlof, R. Portmann, J.Daniel, S. Davis, T. Sanford, G-K Plattner, 2010: Contributions of Stratospheric Water Vapor Changes to Decadal Variations in the Rate of Global Warming, Science, 327, 1219-1223, DOI: 10.1126/science.1182488 (804)

51)# Toon, O.B., D. Starr, E. Jensen, P. Newman, S. Platnick, M. Schoeberl, P. Wennberg, S. Wofsy, M. Kurylo, H. Maring, K. Jucks, M.Craig, M. Vasques, L. Pfister, K. Rosenlof, H. Selkirk, P. Colarco, S.R. Kawa, G. Mace, P. Minnis, K. Pickering, 2010: Planning and Implementation of the Tropical Composition, Cloud and Climate Coupling Experiment (TC4), J. Geophys. Res., 115, D00J04, doi:10.1029/2009JD013073. (95)

52) Pfister, L, H. B. Selkirk, D.O. Starr, K.H. Rosenlof, P. A. Newman, 2010: A Meteorological Overview of the TC^4 mission, J. Geophys. Res., 115, D00J12, doi:10.1029/2009JD013316.

53) Petropavlovskikh, I., E. Ray, S.M. Davis, K. H. Rosenlof, G. Manney, R. Shetter, S. R. Hall, K. Ullman, L. Pfister, J. W. Hair, M. Fenn, M. Avery, and A. M. Thompson, 2010: Low ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007, J. Geophys. Res., 115, D00j16, doi:10.1029/2009JD012804.

54)* Davis, S.M., D. L. Hlavka, E. Jensen, K. H. Rosenlof, Q. Yang, S. Schmidt, S. Borrmann, W. Frey, P. Lawson, H. Voemel, and T.P. Bui, 2010: In situ and lidar observations of tropopause subvisible cirrus clouds during TC4, J. Geophys. Res., 115, D00j17 doi:10.1029/2009JD013093. (56)

55)* Ray, E. A., F. L. Moore, K. H. Rosenlof, S.M. Davis, H. Boenisch, O. Morgenstern, D. Smale, E. Rozanov, M. I. Hegglin, G. Pitari, E. Mancini, P. Braesicke, N. Butchart, S. Hardiman, F. Li, K. Shibata, and D. A. Plummer, 2010: Evidence for Changes in Stratospheric Transport and Mixing Over the Past Three Decades Based on Multiple Datasets and Tropical Leaky Pipe Analysis, J. Geophys. Res., 115, D21304, doi:10.1029/2010JD014206. (59)

56) Briode, J., R.W. Portmann, J.S. Daniel, O.R. Cooper, G.J. Frost, K.H. Rosenlof, A.R. Ravishankara. S. Montska, A. Stohl, 2010: Variations in ozone depletion potentials of very short-lived substances with season and emission region, Geophys. Res. Lett, 37, L19804, doi:10.1029/2010GL044856.

57)# Hurst, D. F., S. J. Oltmans, H. Vömel, K. H. Rosenlof, S. Davis, E. A. Ray, E. Hall and A. Jordan, 2011: Stratospheric water vapor trends over Boulder, Colorado: Analysis of the 30 year Boulder record, J. Geophys. Res., 116, D02306, doi:10.1029/2010JD015065. (125)

58)# Wofsy, S., B.C. Daube, R. Jimenez, E. Kort, J.V. Pittman, S. Park, R. Commane, B. Xiang, G. Santoni, D. Jacob, J. Fisher, C. Pickett-Heaps, H. Wang, K. Wecht, Q.-Q. Wang, B.B. Stephens, S. Shertz, P. Romashkin, T. Campos, J. Haggerty, W.A. Cooper, D. Rogers, S. Beaton, R. Hendershot, J.W. Elkins, D.W. Fahey, R.S. Gao, F. Moore, S.A. Montzka, J.P. Schwarz, D. Hurst, B. Miller, C. Sweeney, S. Oltmans, D. Nance, E. Hintsa, G. Dutton, L.A. Watts, J.R. Spackman, K.H. Rosenlof, E.A. Ray, M.A. Zondlo, M. Diao, R. Keeling, J. Bent, E.L. Atlas, R. Lueb, M.J. Mahoney, M. Chahine, E. Olson, P. Patra, K. Ishijima, R. Engelen, J. Flemming, R. Nassar, D.B.A. Jones, and S.E.M. Fletcher, 2011: HIAPER Pole-to-Pole Observations (HIPPO): Fine-grained, global scale measurements of climatically important atmospheric gases and aerosols, Philosophical Transactions of the Royal Society of London A, 369(1943), 2073-2086, doi:10.1098/rsta.2010.031. (283)

59) Young, P.J., D.W.J. Thompson, K.H. Rosenlof, S. Solomon, and J.-F. Lamarque, 2011: The seasonal cycle and interannual variability in stratospheric temperatures and links to the Brewer-Dobson circulation: An analysis of MSU and SSU data, J. Clim, 24, 6243-6258, DOI: 10.1175/JCLi-D-10-05028.1.

60) Rosenlof, K.H., and D.F. Hurst, Sidebar 2.4: Stratospheric Water Vapor, in State of the Climate in 2010, 2011: edited by K.M. Willett, A.J. Dolman, B.D. Hall, P.W. Thorne, J. Blunden, D.S. Arndt and M.O. Baringer, pp. 70-71, Bull. Amer. Meteor. Soc., 92 (6), S1-S266.

61)# Davis, S. M., and K. H. Rosenlof, 2012: A multi-diagnostic intercomparison of tropical width and jet timeseries using meteorological reanalyses and satellite observations, J. Clim, 25, 1061-1078, DOI: 10.1175/JCLI0-D-11-00127.1 (143)

62) Roscoe, H., and K. Rosenlof, 2011: Revisiting the lower stratospheric water vapour trend from 1950s to 1970s, Atmospheric Science Letters, 4, 321-324, doi: 10.1002/asl.339.

63) Young, P.J., S. Solomon, D.W.J. Thompson, S.C. Sherwood, K.H. Rosenlof, Q. Fu, and J.-F. Lamarque, 2012: Changes in stratospheric temperatures and their implications for changes in the Brewer-Dobson circulation, 1979-2005, J. Clim, 25, 1759-1772, DOI: 10.1175/2011JCLI4048.1.

64) D.F. Hurst and Rosenlof, K.H., 2012: section 2.g.4: Stratospheric Water Vapor, in State of the Climate in 2011, edited by Arndt, D. S, J. Blunden, and M.O. Baringer, pp. 48, Bull. Amer. Meteor. Soc., 93 (7), S1-S264

65) Young, P.J., A. Butler, N. Calvo, L. Haimberger , P. Kushner , D. Marsh , W. Randel , K. H. Rosenlof, 2013: Agreement in late twentieth century Southern Hemisphere stratospheric temperature trends in observations and CCMVal-2, CMIP3 and CMIP5 models, J. Geophys. Res., 118, 605-613, DOI: 10.1002/jgrd.50126

66) Evan, S., K. H. Rosenlof, J. Dudhia, B. Hassler, S. Davis, The representation of the TTL in a tropical channel version of the WRF model, 2013: J. Geophys. Res., 118, 2835-2848, DOI: 10.1002/jgrd.50288

67)* Neely III, R. R., O. B. Toon, S. Solomon, J. P. Vernier, C. Alvarez, J. M. English, K. H. Rosenlof, M. J. Mills, C. G. Bardeen, J. S. Daniel, J. P. Thayer, 2013, Recent anthropogenic increases in SO_2 have minimal impact on stratospheric aerosol, Geophys. Res. Lett., 40, 999- 1004, DOI: 10.1002/grl.50263. (76)

68) Rosenlof, K.H., L. Terray, C. Deser, A. Clement, H. Goosse, S. Davis, Changes in Variability Associated with Climate Change, 2013, in Climate Science for Serving Society, Research, Modeling and Prediction Priorities, Asrar, Ghassem R.; Hurrell, James W. (Eds.), Springer, pg 249-271. (book chapter, not in WOS)

69) Hassler, B., P. J. Young, R. W. Portmann, G. E. Bodeker, J. S. Daniel, K. H Rosenlof, S. Solomon, 2013, Comparison of three vertically resolved ozone data sets: climatology, trends and radiative forcings, Atmos. Chem Phys., 13, 5533-5550, SI^2N special issue, DOI: 10.5194/acp-13-5533-2013

70)* Davis, S.M, C.K. Liang, K.H.Rosenlof, 2013, Interannual variability of tropical tropopause layer clouds, Geophys. Res. Lett., 40, 2862-2866, doi: 10.1002/grl.50512 (56)

71) D.F. Hurst and K.H. Rosenlof, 2013: section 2.g.4: Stratospheric Water Vapor, in State of the Climate in 2012, edited by J. Blunden, and D. S. Arndt, pp. 37, Bull. Amer. Meteor. Soc., 94 (8), S1-S238.

72)# Dessler, A.E., M.R. Schoeberl, T. Wang, S.M. Davis, K.H. Rosenlof, A stratospheric water feedback, 2013: PNAS, vol. 110 no. 4518087–18091, doi:, 10.1073/pnas. (185)

73) Moore, F, E Ray, K. H. Rosenlof; J Elkins, P Tans, A Karion, C Sweeney, 2014: A cost effective trace gas measurement program for long term monitoring of the stratospheric circulation, Bull. American Met. Soc, 2014 95, 147-155, doi: 10.1175/BAMS-D-12-00153.1

74) Gao, R. S., K. H. Rosenlof, D. W. Fahey, P. O. Wennberg, E. J. Hintsa, and T. F. Hanisco, OH in the tropical upper troposphere and its relationships to solar radiation and reactive nitrogen, 2014: J. Atmos. Chem., doi: 10.1007/s10874-014-9280-2

75) Rex, M., I. Wohltmann, T. Ridder, R. Lehmann, K Rosenlof, P, Wennberg, D. Weisenstein, J.Notholt, K. Krüger, V. Mohr, S Tegtmeier, A Tropical West Pacific OH Minimum and Implications for Stratospheric Composition, 2014: Atmos. Chem. Phys., 14, 4827-4841, 2014, doi:10.5194/acp-14-4827-2014

76) Neely III, R. R., P. Yu, K. H. Rosenlof, O. B. Toon, J. S. Daniel, S. Solomon, and H. L. Miller, 2014: The contribution of anthropogenic SO_2 emissions to the Asian tropopause aerosol layer, J. Geophys. Res, 119, 1571–1579, doi:10.1002/2013JD020578.

77) Hurst, D. F., A. Lambert, W. G. Read, S. M. Davis, K. H. Rosenlof, E. G. Hall, A. F. Jordan, and S. J. Oltmans, 2014: Validation of Aura Microwave Limb Sounder stratospheric water vapor measurements by the NOAA frost point hygrometer, J. Geophys. Res., 119, 1612–1625, doi:10.1002/2013JD020757.

78) Rollins, A. W., T. D. Thornberry, R. S. Gao, J. B. Smith, D. S. Sayres, M. R. Sargent, C. Schiller, M. Krämer, N. Spelten, D. F. Hurst, A. F. Jordan, E. G. Hall, H. Vömel, G. S. Diskin, J. R. Podolske, L. E. Christensen, K. H. Rosenlof, E. J. Jensen and D. W. Fahey, 2014; Evaluation of UT/LS hygrometer accuracy by intercomparison during the NASA MACPEX mission, J. Geophys. Res. Atmos., 119, 1915–1935, doi:10.1002/2013JD020817.

79)* Hassler, B., I. Petropavlovskikh, J. Staehelin, T. August, P.K. Bhartia, C. Clerbaux, D. Degenstein, M. De Mazière, B.M. Dinelli, A. Dudhia, G. Dufour, S.M. Frith, L. Froidevaux, S. Godin-Beekmann, J. Granville, N.R.P. Harris, K. Hoppel, D. Hubert, Y. Kasai, M.J. Kurylo, E. Kyrölä, J.-C. Lambert, P.F. Levelt, C.T. McElroy, R. D. McPeters, R. Munro, H. Nakajima, A. Parrish, P. Raspollini, E.E. Remsberg, K.H. Rosenlof, A. Rozanov, T. Sano, Y. Sasano, M. Shiotani, H.G.J. Smit, G. Stiller, J. Tamminen, D.W. Tarasick, J. Urban, R.J. van der A, J. P. Veefkind, C. Vigouroux, T. von Clarmann, C. von Savigny, K.A. Walker, M. Weber, J. Wild, and J. Zawodny, 2014: SI^2N overview paper: ozone profile measurements: techniques, uncertainties and availability Atmos. Meas. Tech., 7, 1395-1427, doi:10.5194/amt-7-1395-2014 (98)

80) D.F. Hurst, S. M Davis and K.H. Rosenlof, 2014: section 2.5: Stratospheric Water Vapor, in State of the Climate in 2013, edited by J. Blunden, and D. S. Arndt, pp. S40, Bulletin of the American Meteorological Society.

81) Maycock, A. C., Joshi, M. M., Shine, K. P., Davis, S. M. and K.H. Rosenlof, 2014: The potential impact of changes in lower stratospheric water vapour on stratospheric temperatures over the past 30 years, Q. J. Roy. Met. Soc, 140, 2176-2185 doi:10.1002/qj.2287

82) Ray, EA, F Moore, KH Rosenlof , SM Davis , C Sweeney , P Tans , T Wang , J Elkins , H Boenisch , A Engel , S Sugawara , T Nakazawa , S Aoki , 2014: Improving SF_6 and CO_2 based mean age trends using a simple stratospheric model incorporating seasonal to multi-decadal variability, J. Geophys. Res., 119, 14110-14128, DOI: 10.1002/2014JD021802 (48)

83) Young, P., S. Davis, B. Hassler, S. Solomon, and K. Rosenlof, 2014: Modeling the climate impact of Southern Hemisphere ozone depletion: The importance of the ozone dataset, Geophys. Res. Lett., 41, 9033-9039, DOI: 10.1002/2014GL061738

84)* Dessler, A. E., M. R. Schoeberl, T. Wang, S. M. Davis, K. H. Rosenlof, and J.-P. Vernier, 2014: Variations of stratospheric water vapor over the past three decades, J. Geophys. Res., 119, 12588-12598, DOI: 10.1002/2014jd021712 (67)

85) Osso, A., Y. Sola, K. Rosenlof, B. Hassler, J. Bech, and J. Lorente, 2015: How Robust are Trends in the Brewer-Dobson Circulation Derived from Observed Stratospheric Temperatures, J. Climate, 28, 3024-3040, DOI: 10.1175/JCLI-D-14-00295

86) F. Tummon, B. Hassler, N.R.P. Harris, J. Staehelin, J. Anderson, G.E. Bodeker, A. Bourassa, S.M. Davis, D. Degenstein, S.M. Frith, L. Froidevaux, E. Kyrölä, M. Laine, C. Long, A.A. Penckwitt, C.E. Sioris, K.H. Rosenlof, C. Roth, H.-J. Wang, J. Wild, and W. Steinbrecht, 2015: Intercomparison of vertically resolved merged satellite ozone data sets: Interannual variability and long-term trends, Atmos. Chem. Phys., 15 Issue:: 3021-3043, DOI: 10.5194/acp-15-3021-2015 (49)

87) Davis, S.M., K.H. Rosenlof and D.F. Hurst, 2015: section 2.5: Stratospheric Water Vapor, in State of the Climate in 2014, edited by J. Blunden, and D. S. Arndt, pp. S46-S48, Bulletin of the American Meteorological Society, Vol. 96, No. 7, July 2015

88) Meyer, J., C. Rolf, C. Schiller, S. Rohs, N. Spelten, A. Afchine, M. Zöger, N. Sitnikov, T.D. Thornberry, A.W. Rollins, Z. Bozóki, D. Tátrai, V. Ebert, B. Kühnreich, P. Mackrodt, O. Möhler, H. Saathoff, K.H. Rosenlof, and M. Krämer, 2015: Two decades of water vapor measurements with the FISH fluorescence hygrometer: a review, Atmos. Chem. Phys., 15, 8521- 8538, doi: 10.5194/acp-15-8521-2015. (40)

89)* Harris, N.R.P, B. Hassler, F. Tummon, G.E. Bodeker, D. Hubert, I. Petropavlovskikh, W. Steinbrecht, J. Anderson, P.K. Bhartia, C.D. Boone, A. Bourassa, S. M. Davis, D. Degenstein, A. Delcloo, S.M. Frith, L. Froidevaux, S. Godin-Beekmann, N. Jones, M.J. Kurylo, E. Kyrölä, M. Laine, S.T. Leblanc, J.-C. Lambert, B. Liley, E. Mahieu, A. Maycock, M. de Mazière, A. Parrish, R. Querel, K.H. Rosenlof, C. Roth, C. Sioris, J. Staehelin, R.S. Stolarski, R. Stübi, J. Tamminen, C. Vigouroux, K. Walker, H. J. Wang, J. Wild, and J.M. Zawodny, 2015, Past changes in the vertical distribution of ozone – Part 3: Analysis and interpretation of trends, 2015: Atmos. Chem. Phys., 15, 9965-9982, doi:10.5194/acp-15-9965-2015. (98)

90) Evan, S., K. Rosenlof, T. Thornberry, A. Rollins and S. Khaykin, TTL cooling and drying during the January 2013 stratospheric sudden warming, 2015: Q. J. Roy. Met. Soc, 141, 3030-3039, doi: 10.1002/qj.2587.

91) Gao, R-S, J.W. Elkins, G.J. Frost, A.C. McComisky, F.L. Moore, D.M. Murphy, J.A. Ogren, I. Petropavlovskikh, K. H. Rosenlof, A Novel Approach to Atmospheric Measurements using Gliding UASs, 2015: Dynamic Data-Driven Environmental Systems Science, 2014, 8964, 10-15, DOI: 10.1007/978-3-319-25138-7_2

92) Dessler, A.E., H. Ye, T. Wang, M.R. Schoeberl, L.D. Oman, A.R. Douglass, A.H. Butler, K.H. Rosenlof, S.M Davis, R. W. Portmann, 2016: Transport of ice into the stratosphere and the humidification of the stratosphere over the 21st century, Geophys. Res. Letts., 45, 2323-2329 doi: 10.1002/2016GL06799

93) Yu, P., O.B. Toon. C.G. Bardeen, A. Bucholtz, K.H. Rosenlof, P.E. Saide, A. Da Silva, L.D. Ziemba, K.L. Thornhill, J-L Jimenez, P Campazano-Jost, J/P. Schwarz, A.E. Perring, K.D. Froyd, N.L. Wagner, M.J. Mills, J.S. Reid, 2016: Surface dimming by the 2013 Rim Fire simulated by a sectional aerosol model, J. Geophys. Res., 121, 7079–7087, doi: 10.1002/2015JD024702

94)# Toon, O.B., H. Maring, J. Dibb, R. Ferrare, D.J. Jacob, E.J. Jensen, Z.L. Luo, G.G. Mace, L.L. Pan, L. Pfister, K.H. Rosenlof, J. Redemann, J.S. Reid, H.B. Singh, A.M. Thompson, R. Yokelson, P. Minnis, G. Chen, K.W. Jucks, A. Pszenny, 2016: Planning, implementation, and scientific goals of the Studies of Emissions and Atmospheric Composition, Clouds and Climate Coupling by Regional Surveys (SEAC^{4}RS) field mission, J. Geophys. Res., 1214967-5009, doi: 10.1002/2015JD024297 (130)

95) Butler, A. H., J.S. Daniel, R.W. Portmann, A.R. Ravishankara, P.J. Young, D.W. Fahey, K.H. Rosenlof, 2016: Diverse policy implications for future ozone and surface UV in a changing climate, Envir. Res. Letts., 11, doi: 10.1088/1748-9326/11/6/064017.

96) Ray, E. A., F. L. Moore, K. H. Rosenlof, D. A. Plummer, F. Kolonjari, and K. A. Walker, 2016: An idealized stratospheric model useful for understanding differences between long-lived trace gas measurements and global chemistry-climate model output, J. Geophys. Res., 121, 5356–5367, doi:10.1002/2015JD024447.

97) Davis, S.M., K.H. Rosenlof, D.F. Hurst, and H.B. Selkirk, 2016: section 2.5: Stratospheric Water Vapor, in State of the Climate in 2015, edited by J. Blunden, and D. S. Arndt, pp. S51-S53, Bulletin of the American Meteorological Society, Vol. 97, No. 8, August 2016

98) Hurst, D. F., W.G. Read, H. Vömel, H.B. Selkirk, K.H. Rosenlof, S.M. Davis, E.G. Hall, A. Jordan, S.J. Oltmans, 2016, Recent divergences in stratospheric water vapor measurements by frost point hygrometers and the Aura Microwave Limb Sounder, Atmos. Meas. Tech., 9, 447-4457, doi:10.5194/amt-2016-157

99)* Davis, S.M., K.H. Rosenlof, B. Hassler, D.F. Hurst, W.G. Read, H. Vömel, H. Selkirk, M. Fujiwara, R. Damadeo, 2016: The Stratospheric Water and Ozone Satellite Homogenized (SWOOSH) database: A long-term database for climate studies, Earth System Science Data, 8, 461-490, doi:10.5194/essd-8-461-2016. (95)

100) Yu, P., D.M. Murphy, R.W. Portmann, O.B. Toon, K.D. Froyd, A.W. Rollins, R.-S. Gao, and K.H. Rosenlof, 2016: Radiative forcing from anthropogenic sulfur and organic emissions reaching the stratosphere, Geophysical Research Letters, 43(17), 9361-9367, doi:10.1002/2016GL070153.

101)* Hassler, B., B.C. McDonald, G.J. Frost, A. Borbon, D. Carslaw, K. Civerolo, C. Granier, P.S. Monks, S. Monks, D.D. Parrish, I.B. Pollack, K.H. Rosenlof, T.B. Ryerson, E. von Schneidemesser, and M. Trainer, 2016: Analysis of long-term observations of NOx and CO in megacities and application to constraining emissions inventories, Geophysical Research Letters, 43(18), 9920-9930, doi:10.1002/2016GL069894. (65)

102)* Jensen, EJ, L Pfister, DE Jordan, TV Bui, R Ueyama, HB Singh, T Thornberry, AW Rollins, R-S Gao, DW Fahey, KH Rosenlof, JW Elkins, GS Diskin, JP DiGangi, RP Lawson, S Woods, EL Atlas, MA Navarro Rodriguez, SC Wofsy, J Pittman, 2017: The NASA Airborne Tropical TRopopause EXperiment (ATTREX): High-Altitude Aircraft Measurements in the Tropical Western Pacific, Bull. Amer. Meteor. Soc., 98, 129-143, doi: 10.1175/BAMS-D-14-00263.1 (65)

103) Lossow, S., F. Khosrawi, G.E. Nedoluha, F. Azam, K. Bramstedt, J.P. Burrows, B.M. Dinelli, P. Eriksson, P.J. Espy, M. Garcia-Comas, J.C. Gille, M. Kiefer, S. Noel, P. Raspollini, K.H. Rosenlof, 2017: A. Rozanov, C.E. Sioris, G.P. Stiller, K.A. Walker, and K. Weigel, The SPARC water vapour assessment II, Comparison of annual, semi-annual and quasi-biennial variations in stratospheric and lower mesospheric water vapour observed from satellites, Atmospheric Measurement Techniques, 10, 1111-1137, doi:10.5194/amt-10-1111-2017.

104) Larson, E.J.L., R.W. Portmann, K.H. Rosenlof, D.W. Fahey, J.S. Daniel, and M.N. Ross, 2017: Global atmospheric response to emissions from a proposed reusable space launch system, Earth's Future, 5(1), 37-48, doi:10.1002/2016EF000399.

105)#Butler, A.H., J.P. Sjoberg, D.J. Seidel, and K.H. Rosenlof, 2017: A sudden stratospheric warming compendium, Earth System Science Data, 9, 63-76, doi:10.5194/essd-9-63-2017. (204)

106) Rollins, A.W., T.D. Thornberry, L.A. Watts, P. Yu, K. Rosenlof, M. Mills, E. Baumann, F.R. Giorgetta, T.V. Bui, M. Höpfner, K.A. Walker, C. Boone, P.F. Bernath, P.R. Colarco, P.A. Newman, D.W. Fahey, and R.S. Gao, 201: The role of sulfur dioxide in stratospheric aerosol formation evaluated using in-situ measurements in the tropical lower stratosphere, Geophys. Res. Letts., 44, 4280-4286, doi:10.1002/2017GL072754.

107)* Avery, M. A., S. M. Davis, K.H. Rosenlof, H. Ye, A. E. Dessler, 2017: Large anomalies in lower stratospheric water vapor and ice during the 2015-2016 El Niño, Nature Geoscience., 10, 405-409, doi:10.1038/ngteo2961. (67)

108)*Ray, E.A., F.L. Moore, J.W. Elkins, K. H. Rosenlof, J. Laube, T. Röckmann, D.R. Marsh, and A.E. Andrews, 2017: Quantification of the SF_6 lifetime based on mesospheric loss measured in the stratospheric polar vortex, J. Geophys. Res., doi:10.1002/2016JD026198. (56)

109) Herman, R. L., Ray, E. A., Rosenlof, K. H., Bedka, K. M., Schwartz, M. J., Read, W. G., Troy, R. F., Chin, K., Christensen, L. E., Fu, D., Stachnik, R. A., Bui, T. P., and Dean-Day, J. M., 2017: Enhanced Stratospheric Water Vapor over the Summertime Continental United States and the Role of Overshooting Convection, Atmos. Chem. Phys., doi:10.5194/acp-2016-1065.

110) Davis, S.M., K. H. Rosenlof, D. F. Hurst, H. B. Selkirk, and H. Vömel, 2017: Stratospheric water vapor [in "State of the Climate in 2016"]. Bull. Amer. Meteor. Soc., 98 (8), S93–S98, doi:10.1175/2017BAMSStateoftheClimate.1.

111)*Yu, P., K.H. Rosenlof, S. Liu, H. Telg, T.D. Thornberry, A.W. Rollins, R.W. Portmann, Z. Bai, E.A. Ray, Y. Duan, L.L. Pan, O.B. Toon, J. Bian, and R.S. Gao, 2017: Efficient transport of tropospheric aerosol into the stratosphere via the Asian summer monsoon anticyclone, PNAS, 114(27), 6972-6977, doi:10.1073/pnas.1701170114. (81)

112)*Steinbrecht, W., L. Froidevaux, R. Fuller, R. Wang, J. Anderson, C. Roth, A. Bourassa, D. Degenstein, R. Damadeo, J. Zawodny, S. Frith, R. McPeters, P. Bhartia, J. Wild, C. Long, S. Davis, K. Rosenlof, V. Sofieva, K. Walker, N. Rahpoe, A. Rozanov, M. Weber, A. Laeng, T. v. Clarmann, G. Stiller, N. Kramarova, S. Godin-Beekmann, T. Leblanc, R. Querel, D. Swart, I. Boyd, K. Hocke, N. Kämpfer, E. M. Barras, L. Moreira, G. Nedoluha, C. Vigouroux, T. Blumenstock, M. Schneider, O. Garcìa, N. Jones, E. Mahieu, D. Smale, M. Kotkamp, J. Robinson, I. Petropavlovskikh, N. Harris, B. Hassler, D. Hubert and F. Tummon, 2017: An update on ozone profile trends for the period 2000 to 2016, Atmos. Chem. Phys, 17: 10675-10690, https://doi.org/10.5194/acp-17-10675-2017 (84)

113) Nedoluha, G. E., Kiefer, M., Lossow, S., Gomez, R. M., Kämpfer, N., Lainer, M., Forkman, P., Christensen, O. M., Oh, J. J., Hartogh, P., Anderson, J., Bramstedt, K., Dinelli, B. M., Garcia-Comas, M., Hervig, M., Murtagh, D., Raspollini, P., Read, W. G., Rosenlof, K., Stiller, G. P., and Walker, K. A., 2017: The SPARC water vapor assessment II: intercomparison of satellite and ground-based microwave measurements, Atmos. Chem. Phys., 17, 14543-14558, https://doi.org/10.5194/acp-17-14543-2017

114) Kolonjari, F., D. A. Plummer, K. A. Walker, P. F. Bernath, C. D. Boone, J. W. Elkins, M. I. Hegglin, G. L. Manney, F. L. Moore, D. Pendlebury, E. A. Ray, K. H. Rosenlof and G. P. Stiller, 2018: Assessing stratospheric transport in the CMAM30 simulations using ACE-FTS measurements, Atmos. Chem. Phys, 18: 6801-6828, https://doi.org/10.5194/acp-18-6801-2018

115) Davis, S. M., K. H. Rosenlof, D. F. Hurst, H. B. Selkirk and H. Vömel, 2018: Stratospheric Water Vapor [in "State of the Climate Report 2017"], Bulletin of the American Meteorological Society 99(8): S54-S56.

116) Khosrawi, F., S. Lossow, G. P. Stiller, K. H. Rosenlof, J. Urban, J. P. Burrows, R. P. Damadeo, P. Eriksson, M. García-Comas, J. C. Gille, Y. Kasai, M. Kiefer, G. E. Nedoluha, S. Noël, P. Raspollini, W. G. Read, A. Rozanov, C. E. Sioris, K. A. Walker and K. Weigel 2018: The SPARC water vapour assessment II: Comparison of stratospheric and lower mesospheric water vapour time series observed from satellites, Atmos. Meas. Tech. 11: 4435-4463, https://doi.org/10.5194/amt-11-4435-2018.

117) Dole, R. M., J. R. Spackman, M. Newman, G. P. Compo, C. A. Smith, L. M. Hartten, J. J. Barsugli, R. S. Webb, M. P. Hoerling, R. Cifelli, K. Wolter, C. D. Barnet, M. Gehne, R. Gelaro, G. N. Kiladis, S. Abbott, E. Akish, J. Albers, J. M. Brown, C. J. Cox, L. Darby, G. de Boer, B. DeLuisi, J. Dias, J. Dunion, J. K. Eischeid, C. Fairall, A. Gambacorta, B. K. Gorton, A. Hoell, J. Intrieri, D. Jackson, P. E. Johnston, R. Lataitis, K. M. Mahoney, K. McCaffrey, H. A. McColl, M. J. Mueller, D. Murray, P. J. Nieman, W. D. Otto, O. Persson, X.-W. Quan, I. Rangwala, A. J. Ray, D. Reynolds, E. R. Dellaripa, K. H. Rosenlof, N. Sakaeda, P. D.

Sardeshmukh, L. D. Slivinski, L. L. Smith, A. Solomon, D. Swales, S. Tulilch, A. B. White, G. A. Wick, M. Winterkorn, D. Wolfe and R. Zamora, 2018: Advancing science and services during the 2015-16 El Niño: The NOAA El Niño Rapid Response Field Campaign, Bull. Am. Met. Soc., 99: 975-1001, https://doi.org/10.1175/BAMS-D-16-0219.1

118) Lossow, S., D. F. Hurst, K. H. Rosenlof, G. P. Stiller, T. v. Clarmann, S. Brinkop, M. Dameris, P. Jöckel, D. E. Kinnison, J. Plieninger, D. A. Plummer, F. Ploeger, W. G. Read, E. E. Remsberg, J. M. Russell and M. Tao, 2018: Trend differences in lower stratospheric water vapour between Boulder and the zonal mean and their role in understanding fundamental observational discrepancies, Atm. Chem. and Phys. 18: 8331–8351.

119) Davis, S., B. Hassler and K. H. Rosenlof, 2018: Revisiting ozone measurements as an indicator of tropical width, Progress in Earth and Planetary Science, 5, 56, doi: 10.1186/s40645-018-0214-5

120) Rosenlof, K. H., 2018: Changes in water vapour and aerosols and their relation to stratospheric ozone. 30th Anniversary of the Montreal Protocol special issue, Comptes Rendus Geoscience, 350, 7, 376-383, doi: 10.1016/j.crte.2018.06.014. (November)

121) Rollins, A.W., T.D. Thornberry, E. Atlas, M. Navarro, S. Schauffler, F. Moore, J. Elkins, E. Ray, K. H. Rosenlof, V. Aquila, and R.-S. Gao, 2018: SO_2 observations and sources in the western Pacific tropical tropopause region, J. Geophys. Res., 123, 13549-13559, doi:10.1029/2018JD029635.

123) Yu, P., K. D. Froyd, R. W. Portmann, O. B. Toon, S. R. Freitas, C. G. Bardeen, J. M. Katich, J. P. Schwarz, C. Williamson, A. Kupc, C. Brock, S. Liu, R.-S. Gao, G. Schill, T. Fan, K. H. Rosenlof and D. M. Murphy, 2019: Efficient In-Cloud Removal of Aerosols by Deep Convection, Geophys, Res. Letts., 46, 1061-1069, doi:10.1029/2018GL080544.

124) Robrecht, S., B. Vogel, J.-U. Grooß, K. Rosenlof, T. Thornberry, A. Rollins, M. Krämer, L. Christensen, and R. Müller, 2019: Mechanism of ozone loss under enhanced water vapour conditions in the mid-latitude lower stratosphere in summer, Atmos. Chem. Phys., https://doi.org/10.5194/acp-2018-1193.

125)* Grise, K.M., S.M. Davis, I.R. Simpson, D.W. Waugh, Q. Fu, R.J. Allen, K.H. Rosenlof, C.C. Ummenhofer, K.B. Karnauskas, A.C. Maycock, X. Quan, T. Birner, P.W. Staten, 2019: Recent tropical expansion: Natural variability or forced response? J. Climate, 32(5),1551-1571, https://doi.org/10.1175/JCLI-D-18-0444.1 (65)

126) Lossow, S., F. Khosrawi, M. Kiefer, K.A. Walker, J.-L. Bertaux, L. Blanot, R. James M, E. E. Remsberg, J. C. Gille, T. Sugita, C. E. Sioris, B. M. Dinelli, E. Papandrea, P. Raspollini, M. Garcia-Comas, G.P. Stiller, T. von Clarmann, A. Dudhia, W.G. Read, G.E. Nedoluha, R. P. Damadeo, J.M. Zawodny, K. Weigel, A. Rozanov, F. Azam, K. Bramstedt, S. Noël, J. P. Burrows, H. Sagawa, Y. Kasai, J. Urban, P. Eriksson, D. P. Murtagh, M. E. Hervig, C. Högberg, D. F. Hurst and K. H. Rosenlof, 2019: The SPARC water vapour assessment II: Profile-to-profile comparisons of stratospheric and lower mesospheric water vapour data sets obtained from satellites. Atmospheric Measurement Techniques 12: 2693-2732. DOI 10.5194/amt-12-2693-2019

127)#Yu, P., O. B. Toon, C. G. Bardeen, Y. Zhu, K. H. Rosenlof, R. W. Portmann, T. D. Thornberry, R.-S. Gao, S. M. Davis, E. Wolf, J. de Gouw, D. A. Peterson, M. D. Fromm and A. Robock, 2019: Black carbon lofts wildfire smoke high into the stratosphere to form a persistent plume, Science 365(6453): 587-590. DOI: 10.1126/science.aax1748 (117)

128) Davis, S. M., K. H. Rosenlof, D. F. Hurst, H. B. Selkirk and H. Vömel, 2019: "Stratospheric Water Vapor [in “State of the Climate Report 2018”]." Bulletin of the American Meteorological Society 100(9): S56-S58, doi:10.1175/2019BAMSStateoftheClimate.1.

129) Staten, P. W., K. M. Grise, S. M. Davis and K. H. Rosenlof, 2020: Tropical widening: From global variations to regional impacts. Bulletin of the American Meteorological Society, 101 (6): E897–E904, doi: 10.1175/BAMS-D-19-0047.1

130) Davis, S.M., K.H. Rosenlof, D.F. Hurst, H. Vömel, and H.B. Selkirk, 2020: Stratospheric Water Vapor [in "State of the Climate Report 2019"], Bulletin of the American Meteorological Society, 101(8), S81-S83, doi:10.1175/2020BAMSStateoftheClimate.1

131) Evan, S., J. Brioude, K.H. Rosenlof, S.M. Davis, H. Vömel, D. Héron, F. Posny, J.-M. Metzger, V. Duflot, G. Payen, H. Vérèmes, P. Keckhut, and J.-P. Cammas, 2020: Effect of deep convection on the TTL composition over the Southwest Indian Ocean during austral summer, Atmospheric Chemistry and Physics, 20, 10565-10586, doi:10.5194/acp-20-10565-2020.

132) Ray, E.A., R.W. Portmann, P. Yu, J. Daniel, S.A. Montzka, G.S. Dutton, B.D. Hall, F.L. Moore, and K.H. Rosenlof, 2020: The influence of the stratospheric Quasi-Biennial Oscillation on trace gas levels at the Earth's surface, Nature Geoscience, doi:10.1038/s41561-019-0507-3.

133) Davis, N., S. Davis, R. Portmann, E. Ray, K. Rosenlof and P. Yu, 2020: A comprehensive assessment of tropical stratospheric upwelling in specified dynamics CESM1 (WACCM), Geoscientific Model Development, 13, 717-734, doi:10.5194/gmd-13-717-2020.

134) Héron, D., S. Evan, J. Brioude, K. Rosenlof, F. Posny, J.-M. Metzger and J.-P. Cammas, 2020: Impact of convection on the upper-tropospheric composition (water vapor and ozone) over a subtropical site (Réunion island; 21.1° S, 55.5° E) in the Indian Ocean, Atmospheric Chemistry and Physics 20: 8611–8626, DOI: 10.5194/acp-20-8611-2020.

135) Pfister, G.G., S.D. Eastham, A.F. Arellano, B. Aumont, K. C.Barsanti, M.C. Barth, A. Conley, N.A. Davis, L.K. Emmons, J.D. Fast, A.M. Fiore, B. Gaubert, S. Goldhaber, C. Granier, G.A. Grell, M. Guevara, D.K. Henze, A. Hodzic, X. Liu, D.R. Marsh, J.J. Orlando, J.M.C. Plane, L.M. Polvani, K.H. Rosenlof, A.L. Steiner, D. Jacob, and G.P. Brasseur, 2020: A MUlti-Scale Infrastructure for Chemistry and Aerosols (MUSICA), Bulletin of the American Meteorological Society, doi:10.1175/BAMS-D-19-0331.1.

136) Yu, P., S. M. Davis, O. B. Toon, R. W. Portmann, C. G. Bardeen, J. E. Barnes, H. Telg, C. Maloney, X. Wang and K. H. Rosenlof (2021). Persistent stratospheric warming due to 2019-20 Australian wildfire smoke. Geophys. Res. Lett., 48(7), doi:10.1029/2021GL92609.

137) Park, M., W. J. Randel, R. P. Damadeo, D. E. Flittner, S. M. Davis, K. H. Rosenlof, N. Livesey, A. Lambert and W. Read (2021). "Near-global variability of stratospheric water vapor observed by SAGE III/ISS." J. Geophys. Res., 126(7), doi: 10.1029/2020JD034274

138) Davis, S. M., R. Damadeo, D. Flittner, K. H. Rosenlof, M. Park, W. J. Randel, E. G. Hall, D. Huber, D. F. Hurst, A. F. Jordan, S. Kizer, L. F. Millan, H. Selkirk, G. Taha, K. A. Walker and H. Vömel, (2021) Validation of SAGE III/ISS solar water vapor data with correlative satellite and balloon-borne measurements, J. Geophys. Res., 126(2), doi: 10.1029/2020JD033803

139) Gao, R.S., K.H.Rosenlof, B. Kärcher, S. Tilmes, O.B. toon, C. Maloney, P. Yu, (2021) Toward practical stratospheric aerosol albedo modification - solar powered lofting, Science Advances, 20(7), doi: 10.1126/sciadv.abe3416

140) Davis, S.M., K.H. Rosenlof, D.F. Hurst, and H. Vömel (2021) Stratospheric Water Vapor [in "State of the Climate Report 2020 edited by J. Blunden, and T. Boyer"], section g5, pp. S97=S98, Bulletin of the American Meteorological Society, doi: 10.1175/2021BAMSStateoftheClimate.1

141) Thompson, C.R., S.C. Wofsy, M.J. Prather, P.A. Newman, T.F. Hanisco, T.B. Ryerson, D.W. Fahey, E.C. Apel, C.A. Brock, W.H. Brune, K. Froyd, J.M. Katich, J.M. Nicely, J. Peischl, E. Ray, P.R. Veres, S. Wang, H.M. Allen, E. 15 Asher, H. Bian, D. Blake, I. Bourgeois, J. Budney, T.P. Bui, A. Butler, P. Campuzano-Jost, C. Chang, M. Chin, R. Commane, G. Correa, J.D. Crounse, B. Daube, J.E. Dibb, J.P. DiGangi, G.S. Diskin, M. Dollner, J.W. Elkins, A.M. Fiore, C.M. Flynn, H. Guo, S.R. Hall, R.A. Hannun, A. Hills, E.J. Hintsa, A. Hodzic, R.S. Hornbrook, L.G. Huey, J.L. Jimenez, R.F. Keeling, M.J. Kim, A. Kupc, F. Lacey, L.R. Lait, J.-F. Lamarque, J. Liu, K. McKain, S. Meinardi, D.O. Miller, S.A. Montzka, F.L. Moore, E.J. Morgan, D.M. Murphy, L.T. Murray, B.A. Nault, J.A. Neuman, L. Nguyen, Y.G. Ramos, A. Rollins, K. Rosenlof, M. Sargent, G. Schill, J.P. Schwarz, J.M. St. Clair, S.D. Steenrod, B.B. Stephens, S.E. Strahan, S.A. Strode, C. Sweeney, A.B. Thames, K. Ullmann, N. Wagner, R. Weber, B. Weinzierl, P.O. Wennberg, C.J. Williamson, G.M. Wolfe, and L. Zeng, (2022) The NASA Atmospheric Tomography (ATom) mIssion imaging the chemistry of the global atmosphere, Bulletin of the American Meteorological Society, doi:10.1175/BAMS-D-20-0315.1. (not in WOS?)

142) Froyd, K. D., P. Yu, G. P. Schill, C. A. Brock, A. Kupc, C. J. Williamson, E. J. Jensen, E. Ray, K. H. Rosenlof, H. Bian, A. S. Darmenov, P. R. Colarco, G. S. Diskin, T. Bui and D. M. Murphy (2022). " Dominant role of mineral dust in cirrus cloud formation revealed by global-scale measurements Nature Geoscience, https://doi.org/10.1038/s41561-022-00901-w

143) Treadaway, V., E. Atlas, S. Schauffler, M. Navarro, R. Ueyama, L. Pfister, T. Thornberry, A Rollins, J. Elkins, F. Moore, K. Rosenlof, (2022) Long-range transport of Asian emissions to the West Pacific tropical tropopause layer, J. Atmos Chem. https://doi.org/10.1007/s10874-022-09430-7

144) Tilmes, S., A. Smith, P. Lawrence, T. Barnes, G. Gadikota, W. Grabowski, D. MacMartin, B. Medeiros, M. Monica, A. Prein, R. Rasmussen, K. Rosenlof, D. Rothman, A. Seimon, G. Shrestha and B. Stephens (2022). Community Climate Intervention Strategies Workshop Report, BAMS, E591–E598, https://doi.org/10.1175/BAMS-D-21-0053.1

145) Solomon, S., K. Dube, K. Stone, P. Yu, D. Kinnison, O. B. Toon, S. E. Strahan, K. H. Rosenlof, R. Portmann, S. Davis, W. Randel, P. Bernath,C. Boone, C. G. Bardeen, A. Bourassa, D. Zawada, and D. Degenstein, On the stratospheric chemistry of midlatitude wildfire smoke (2022), PNAS 119 No. 10 e2117325119, doi:10.1073/pnas.2117325119

146) Maloney, C. M., Portmann, R. W., Ross, M. N., & Rosenlof, K. H. (2022). The climate and ozone impacts of black carbon emissions from global rocket launches. J. Geophysl Res., 127, e2021JD036373. https://doi.org/10.1029/2021JD036373

147) Liu, C.-C., RW Portmann, KH Rosenlof, Y Peng, P Yu (2022) Significant effective radiative forcing of stratospheric wildfire smoke. *Geophysical Research Letters*, 49, e2022GL100175. https://doi.org/10.1029/2022GL100175

148) Ray, E. A., Atlas, E. L., Schauffler, S., Chelpon, S., Pan, L., Bönisch, H., and Rosenlof, K. H. (2022) Age Spectra and Other Transport Diagnostics in the North American Monsoon UTLS from SEAC^{4}RS In Situ Trace Gas Measurements, Atmos. Chem. Phys, 22, 6539–6558, https://doi.org/10.5194/acp-22-6539-2022, 2022. May 2022

149) Read, W. G., Stiller, G., Lossow, S., Kiefer, M., Khosrawi, F., Hurst, D., Vömel, H., Rosenlof, K., Dinelli, B. M., Raspollini, P., Nedoluha, G. E., Gille, J. C., Kasai, Y., Eriksson, P., Sioris, C. E., Walker, K. A., Weigel, K., Burrows, J. P., and Rozanov, A. (2022) The SPARC water vapor assessment II: Assessment of satellite measurements of upper tropospheric water vapor, Atmos. Meas. Tech. 15, 3377–3400, https://doi.org/10.5194/amt-15-3377-2022, 2022. June 2022

150) Davis, S.M., K.H. Rosenlof, D.F. Hurst, H. Vömel and R. Stauffer (2022) Stratospheric Water Vapor [in "State of the Climate Report 2021 edited by J. Blunden, and T. Boyer"], section g5, pp: S93-S96, Bulletin of the American Meteorological Society, doi: 10.1175/2022BAMSStateoftheClimate.1

151) Zhu, Y., C. Bardeen, S. Tilmes, M. Mills, X. Wang, V. L. Harvey, G. Taha, D. Kinnison, R. W. Portmann, P. Yu, K. Rosenlof, M. Avery, C. Kloss, C. Li, S. Glanville, L. Millán, T. Deshler, N. Krotkov and O. B. Toon (2022). "Perturbations in stratospheric aerosol evolution due to the water-rich plume of the 2022 Hunga-Tonga eruption." Communications Earth & Environment 3(248), Oct 2022

152) Thornberry, T., R.-S. Gao, S. Ciciora, L. Watts, R. McLaughlin, A. Leonardi, K. H. Rosenlof, B. Argrow, J. Elston, M. Stachura, J. Fromm, A. Brewer, P. Schroeder and M. Zucker (2023). "A lightweight remote sensing payload for wildfire detection and fire radiative power measurements." Sensors 2023, 23(7), 3514; https://doi.org/10.3390/s23073514 (Mar 2023)

153) Polvani, L. M., J. Keeble, A. Banerjee, G. Chiodo, R. Checa-Garcia, H. Reider and K. H. Rosenlof (2023). "No evidence of worsening Arctic springtime ozone losses over the 21st century." Nature Communications,14,Article number: 1608 https://doi.org/10.1038/s41467-023-37134-3 (Mar 2023)

154) Davis, S. M., N. Davis, R. W. Portmann, E. Ray and K. H. Rosenlof (2023). "The role of tropical upwelling in explaining discrepancies between recent modeled and observed lower stratospheric ozone trends." Atmospheric Chemistry and Physics 23(5): 3347-3361. https://doi.org/10.5194/acp-23-3347-2023

155) Katich, J. M., E. C. Apel, I. Bourgeois, C. Brock, T. P. Bui, P. Campuzano-Jost, R. Commane, B. Daube, M. Dollner, M. Fromm, K. D. Froyd, A. J. Hills, R. S. Hornbrook, J. Jimenez, A. Kupc, K. D. Lamb, K. McKain, F. Moore, D. M. Murphy, B. A. Nault, J. Peischl, A. E. Perring, D. A. Peterson, E. A. Ray, K. H. Rosenlof, T. Ryerson, G. P. Schill, J. C. Schroder, B. Weinzierl, C. Thompson, C. J. Williamson, S. J. Wofsy, P. Yu and J. P. Schwarz (2023). "Pyrocumulonimbus significantly impact the stratospheric aerosol budget." Science 379(664): 815-820.

156) Davis, S. M., K. H. Rosenlof, D. F. Hurst and H. Vömel (2023) Stratospheric water vapor [in "State of the Climate in 2022"], BAMS, https://doi.org/10.1175/BAMS-D-23-0090.1

157) Yu, P., Portmann, R. W., Peng, Y., Liu, C.-C., Zhu, Y., Asher, E., Bai, Z., Lu, Y., Bian, J., Mills, M., Schmidt, A., Rosenlof, KH, Toon, OB (2023). Radiative forcing from the 2014–2022 volcanic and wildfire injections. *Geophysical Research Letters*, 50, e2023GL103791. https://doi.org/10.1029/2023GL103791

158) Peng, Y., Yu, P., Portmann, R. W., Rosenlof, K. H., Zhang, J., Liu, C.-C., et al. (2023). Perturbation of tropical stratospheric ozone through homogeneous and heterogeneous chemistry due to Pinatubo. *Geophysical Research Letters*, 50, e2023GL103773. https://doi.org/10.1029/2023GL103773

159) Asher, E., M. Todt, K. H. Rosenlof, T. Thornberry, R. Gao, G. Taha, P. Walter, S. Alvarez, J. Flynn, S. Davis, S. Evan, J. Brioude, J.-M. Metzger, D. F. Hurst, E. Hall and K. Xiong (2023) Unexpected rapid aerosol formation in the Hunga Tonga plume. PNAS, https://doi.org/10.1073/pnas.2219547120

160) Evan, S., J. Brioude, K. H. Rosenlof, R.-S. Gao, R. W. Portmann, R. Volkamer, C. F. Lee, J.-M. Metzger, K. Lamy, P. Walter, S. L. Alvarez, J. H. Flynn, E. Asher, Michael Todt, S. M. Davis, T. Thornberry, H. Vömel, F. G. Wienhold, R. M. Stauffer, L. Millán, M. L. Santee, L. Froidevaux and W. G. Read (2023). Rapid ozone loss following humidification of the stratosphere by the Hunga Tonga eruption. Science ,). Rapid ozone loss following humidification of the stratosphere by the Hunga Tonga eruption.

160) Larson, E. J. L., K. H. Rosenlof, R-S Gao (2023), Increasing Antarctic ice mass to help offset sealevel rise, Atmosphere, 14(10), 1564; https://doi.org/10.3390/atmos14101564

161) Kiefer, M., Hurst, D. F., Stiller, G. P., Lossow, S., Vömel, H., Anderson, J., Azam, F., Bertaux, J.-L., Blanot, L., Bramstedt, K., Burrows, J. P., Damadeo, R., Dinelli, B. M., Eriksson, P., García-Comas, M., Gille, J. C., Hervig, M., Kasai, Y., Khosrawi, F., Murtagh, D., Nedoluha, G. E., Noël, S., Raspollini, P., Read, W. G., Rosenlof, K. H., Rozanov, A., Sioris, C. E., Sugita, T., von Clarmann, T., Walker, K. A., and Weigel, K. (2023) The SPARC water vapour assessment II: Biases and drifts of water vapour satellite data records with respect to frost point hygrometer records, Atmos. Meas. Tech., https://doi.org/10.5194/amt-16-4589-2023

162) Schwarz, J, RS Gao, TD Thornberry, AW Rollings, KH Rosenlof, RW Portmann, TP Bui, E Jensen, EA Ray (2024) Considering intentional stratospheric dehydration for climate benefits, Science Advances, DOI: 10.1126/sciadv.adk059

163) Liu, S, P. Yu, S Woods, KH Rosenlof, RS Gao (2024) Enhanced aerosol mass in the tropical tropopause layer linked to ozone abundance, GRL DOI: 10.1029/2023GL107451)

164) Davis, S. M., K. H. Rosenlof, E. Asher, H. Vömel, R. M. Stauffer, & D. F. Hurst (2024) Stratospheric water vapor [in "State of the Climate in 2023"], BAMS, 104, 8, DOI: 10.1175/2024BAMSStateoftheClimate.1

165) Li, C., Y. Peng, E. Asher, A. A. Baron, M. Todt, T. D. Thornberry, S. Evan, J. Brioude, P. Smale, R. Querel, K. H. Rosenlof, L. Zhou, J. Xu, K. Qie, J. Bian, O.B. Toon, Y. Zhu, P. Yu (2024). Microphysical simulation of the 2022 Hunga volcano eruption using a sectional aerosol model. *Geophysical Research Letters*, 51, e2024GL108522. https://doi.org/10.1029/2024GL108522

166) Tilmes, S., K.H Rosenlof, D,Visioni, E. M. Bednarz, T. Felgenhauer, W.Smith, C.Lennard, M. S Diamond, M. Henry, C.S Harrison, C. Thompson, Research criteria towards an interdisciplinary Stratospheric Aerosol Intervention assessment, *Oxford Open Climate Change*, Volume 4, Issue 1, 2024, kgae010, https://doi.org/10.1093/oxfclm/kgae010

167) Zhu, Y., Portmann, R. W., Kinnison, D., Toon, O. B., Millán, L., Zhang, J., Vömel, H., Tilmes, S., Bardeen, C. G., Wang, X., Evan, S., Randel, W. J., and Rosenlof, K. H. (2023) Stratospheric ozone depletion inside the volcanic plume shortly after the 2022 Hunga Tonga eruption, Atmos. Chem. Phys., 23, 13355–13367, https://doi.org/10.5194/acp-23-13355-2023.

PUBLISHED DATA SETS

1) Rosenlof, Karen; Hassler, Birgit; Bodeker, Greg, NOAA CDR Program. (2015). NOAA Climate Data Record (CDR) of Zonal Mean Ozone Binary Database of Profiles (BDBP), version 1.0. NOAA National Climatic Data Center. doi:10.7289/V56M34RT

2) Davis, Sean; Rosenlof, Karen; NOAA ESRL (2016): Stratospheric Water and OzOne Satellite Homogenized (SWOOSH), Version 2. NOAA National Centers for Environmental Information (NCEI). doi:10.7289/V5TD9VBX

3) Wofsy, S.C., S. Afshar, H.M. Allen, E. Apel, E.C. Asher, B. Barletta, J. Bent, H. Bian, B.C. Biggs, D.R. Blake, N. Blake, I. Bourgeois, C.A. Brock, W.H. Brune, J.W. Budney, T.P. Bui, A. Butler, P. Campuzano-Jost, C.S. Chang, M. Chin, R. Commane, G. Correa, J.D. Crounse, P. D. Cullis, B.C. Daube, D.A. Day, J.M. Dean-Day, J.E. Dibb, J.P. DiGangi, G.S. Diskin, M. Dollner, J.W. Elkins, F. Erdesz, A.M. Fiore, C.M. Flynn, K. Froyd, D.W. Gesler, S.R. Hall, T.F. Hanisco, R.A. Hannun, A.J. Hills, E.J. Hintsa, A. Hoffman, R.S. Hornbrook, L.G. Huey, S. Hughes, J.L. Jimenez, B.J. Johnson, J.M. Katich, R. Keeling, M.J. Kim, A. Kupc, L.R. Lait, J.-F. Lamarque, J. Liu, K. McKain, R.J. Mclaughlin, S. Meinardi, D.O. Miller, S.A. Montzka, F.L. Moore, E.J. Morgan, D.M. Murphy, L.T. Murray, B.A. Nault, J.A. Neuman, P.A. Newman, J.M. Nicely, X. Pan, W. Paplawsky, J. Peischl, M.J. Prather, D.J. Price, E. Ray, J.M. Reeves, M. Richardson, A.W. Rollins, K.H. Rosenlof, T.B. Ryerson, E. Scheuer, G.P. Schill, J.C. Schroder, J.P. Schwarz, J.M. St.Clair, S.D. Steenrod, B.B. Stephens, S.A. Strode, C. Sweeney, D. Tanner, A.P. Teng, A.B. Thames, C.R. Thompson, K. Ullmann, P.R. Veres, N. Vieznor, N.L. Wagner, A. Watt, R. Weber, B. Weinzierl, P. Wennberg, C.J. Williamson, J.C. Wilson, G.M. Wolfe, C.T. Woods, and L.H. Zeng. 2018. ATom: Merged Atmospheric Chemistry, Trace Gases, and Aerosols. ORNL DAAC, Oak Ridge, Tennessee, USA. https://doi.org/10.3334/ORNLDAAC/1581

UNREVIEWED PUBLICATIONS

1) Rosenlof, K. H., 1984: The sensitivity of the Walker Circulation to different basic states in a linear model. Master's Thesis, Dept. of Atm. Sci., Colorado State University.
2) Rosenlof, K. H. and D. E. Stevens, 1984: The sensitivity of the Walker Circulation to different basic states in a linear model. Atmos. Sci. paper #385, CSU Dept. of Atm. Sci., Fort Collins, Co.
3 Rosenlof, K. H., 1994: Mass transport in the stratosphere examined using the transformed Eulerian-mean residual circulation. Doctoral Dissertation, Dept. of Atm. Sci., University of Washington.
4) Waters, J. W, S. Dorling, J-H Kim, M. Morrey, and K. Rosenlof, 1997, The Upper Atmosphere Research Satellite (UARS), in The Stratosphere and its Role in the Climate System, G. Brasseur, editor, NATO ASI Series I: Global Environmental Change, Vol. 54, Springer-Verlag, Berlin Heidelberg, 345-365.
5) Rosenlof, K.H., 2008, Water Vapor in the Atmosphere, Windswept, The Quarterly Bulletin of the Mount Washington Observatory, invited article, Spring 2008 issue, pg 44-48.
6) Rosenlof, K., Stratospheric Water Vapor, in Encyclopedia of Atmospheric Sciences, 2nd Edition, edited by G.R. North, J. Pyle and F. Zhang, pp. 250-256, Academic Press, Oxford, (2015).
7) Alvarado, Matthew; Andrews, Arlyn; Barnet, Chris; Bowman, Kevin; Cady-Pereira, Karen; De Gouw, Joost; Fahey, David; Fischer, Emily; Gambacorta, Antonia; Jones, Dylan; Karion, Anna; Kim, Si-Wan; Liu, Quanhua; Mao, Jingqiu; Merrelli, Aronne; Millet, Dylan; Nalli, Nicholas; Neuman, Andrew; Nowak, John; Payne, Vivienne; Pierce, Bradley; Rosenlof, Karen; Saikawa, Eri; Sharma, Awdhesh; Shephard, Mark; Smith, Nadia; Sweeney, Colm; Tong, daniel; Wong, Jun; Warner, Juying; Wolf, Walter; Worden, Helen; Xiong, Xiaozhen; Yurganov, Leonid; Zhu, Liye; (2015). Advancing atmospheric chemistry through the use of satellite observations from the cross-track infrared sounder (CrIS). U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Oceanic and Atmospheric Research, Climate Program Office, Atmospheric Chemistry, Carbon Cycle, & Climate Program. http://doi.org/10.7289/V50V89SS

8) Croxton, A.N., L. Myles, S.B. Kapnick, M.O. Baringer, P.L. Heinselman, K.H. Rosenlof, and D.G. Turner, 2018: The First OAR Forum Report: Atmospheric chemistry/air composition and ecosystem modeling, A Hoell and A. Armas (eds.). Proceedings, Report from the First OAR Forum, 15-16 June 2017, Silver Spring, MD, 23 pp.
9) Frost, G. J., M. Kopacz, S. Kondragunta, R. Ahmadov, J. Al-Saadi, A. Andrews, C. Barnet, V. Breeze, J. Christopoulos, O. Cooper, A. Crawford, L. Flynn, A. Gaudel, C. Martin, B. McDonald, J. McQueen, F. Paulot, M. Pavolonis, I. Petropavlovskikh, R. B. Pierce, K. H. Rosenlof, R. Saylor, T. Schmit, I. Stajner, D. Stanitski and J. Szykman (2020). A value assessment of an atmospheric composition capability on the NOAA next-generation geostationary and extended orbits (GEO-EX) missions. NOAA Technical Report, NOAA Technical Report. OAR CPO 8. (Nov 2020)
10) Maloney, C, R Portmann, M. Ross, K. Rosenlof, C Bardeen, (2024) Stratospheric loading and radiative impacts from increased Al2O3 emissions caused by an anticipated increase in satellite re-entry frequency, Conference proceedings, American Institute of Aeronautics and Astronautics SciTech, doi: 10.2514/6.2024-2169

NONSCIENTIFIC PUBLICATIONS

1) Rosenlof, Crutzen, Fehsenfeld, Ennis, Obituary for George C. Reid (1929-2011), EOS, Volume 92, Number 27, 13 September 2011 pg 307.
2) Rosenlof, Müller, Obituary for Cornelius Schiller (1961-2012), EOS, Volume 93, Number 32, 7 August 2012, pg 211.

INVITED SEMINARS & LECTURES

1) Feb. 7, 1996, Lecture on Stratosphere-Troposphere exchange in A. R. Ravishankara's graduate class in atmospheric chemistry, University of Colorado, Boulder, Colorado.
2) April 4 1996, "Summer Hemisphere Differences in Temperature and Transport in the Lower Stratosphere", Geophysical Fluid Dynamics Laboratory, Princeton, New Jersey,
3) Nov. 5, 1996, "Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere", NOAA Aeronomy Laboratory Seminar, Boulder, Colorado.
4) Apr. 17, 1997, "Mass Transport in the Lower Stratosphere Inferred from Water Vapor Measurements", Colorado State University Department of Atmospheric Science Seminar, Fort Collins, CO
5) Oct. 24, 1997, "Tropical-Midlatitude Transport in the Lower Stratosphere", SOWER/Pacific Workshop, Hitachi-Naka City, Japan.
6) Dec 8, 2000 Stratospheric water vapor trends and associated changes in the mean meridional circulation, NOAA Aeronomy Laboratory Seminar, Boulder, CO
7) Feb 15, 2001, Trends in Stratospheric Water Vapor: Observations and Possible Causes, NOAA GFDL Seminar, Princeton, NJ.
8) Feb 16, 2001, A Possible Expansion of the Tropical Tropopause Region over the Past 20 Years, NOAA GFDL Seminar, Princeton, NJ.
9) Jan 27, 2004. Pre-AVE Science Overview, Short Course on Airborne Instrumentation, National University of Costa Rica.
10) Feb 23, 2004, Changes in tropical upwelling: a possible cause for changes in stratospheric water vapor, NCAR ACD Seminar.
11) Jul 9, 2005, Changes in stratospheric water vapour, Reading University, Reading, UK
12) Sep 27, 2006, Water vapor trends, Strat-Hour seminar, Reading University, Reading, UK
13) May 2 2008, Changes in the temperature and water vapor content of the tropical lower stratosphere: A possible sea-surface connection, ATOC seminar, University of Colorado,

Boulder, CO

14) Feb 17, 2010, The stratospheric residual circulation, lecture in the Middle Atmosphere Dynamics class, instructor Thomas Birner, Colorado State University, Fort Collins, CO.
15) Nov 12, 2010, Stratospheric circulation changes and their relation to species distributions, ATOC/LASP seminar, University of Colorado, Boulder, CO.
16) April 19, 2012, The stratospheric mean meridional circulation and its relation to water, ozone and climate, Colorado State University Atmospheric Science Department seminar: part of the CSU Atmospheric Sciences 50th anniversary seminar series.
17) March 25, 2016, Research at NOAA Earth System Research Laboratory; Chemical Sciences 1: Instrumentation & 2: Tropical Widening, Météo-France à La Réunion seminar, St. Denis, La Réunion
18) September 6, 2016, Upper tropospheric and lower stratosphere water vapor observations from satellite, balloon and aircraft: what have we learned over the past 70 years?, National Weather Center Colloquium, Norman, Oklahoma.
19) March 10, 2017, Upper tropospheric and lower stratosphere water vapor observations from satellite, balloon and aircraft: what have we learned over the past 70 years?, Atmospheric Sciences Colloquium, University of Washington.
20) Aug 1, 2018, Trends and variability in lower stratospheric ozone and water vapor, ICAS/SEE/Chemistry/Priestley Center Seminar, Leeds, UK.
21) Nov 12, 2018, Topics in Lower Stratospheric Ozone, Atmospheric Physics Seminars, Physics Department, University of Toronto, Toronto, Canada.
22) June 25, 2020, Variability and Trends in Lower Stratospheric Composition, Data Science of the Natural Environment Seminar, Lancaster University, UK, remote
23) May 13, 2022, Addressing Climate Change, 10% at a time: Creative geoengineering proposals, Lancaster Environment Centre seminar, Lancaster University, UK
24) Sep 16, 2022, TR^{2}Ex: Tonga volcano Rapid Response Experiment, ETH Zürich Institute for Atmospheric and Climate Science (https://iacweb.ethz.ch/doc/events/Rosenlof.pdf)
25) Dec 5, 2023, SAI: What is it, and why study it? Presentation at the GSFC AeroCenter Panel on GeoEngineering: What We Can Say, What We Can't, And The Prospects for Improved Scientific Understanding, Virtual presentation

CONFERENCE & WORKSHOP PRESENTATIONS (* indicates invited)

1) Rosenlof, K. H., D. E. Stevens and J. R. Anderson: A modeling study of the Walker Circulation using different basic states in a linear model, Presentation at the 16th Conference on Hurricanes and Tropical Meteorology, American Meteorological Society, May 14-17, 1985, Houston, Texas.
2) Thomas R. J., K. H. Rosenlof, Dynamical control of ozone in the mesosphere, two regions observed by SME, Presentation at the 5th General Assembly of the International Association of Geomagnetism and Aeronomy, Aug. 5-17, 1985, Prague, Czech.
3) Rosenlof, K. H., R. J. Thomas and G. E. Thomas, Five-day mesospheric waves observed in SME ozone, Presentation at the Fall meeting of the American Geophysical Union, Dec. 1988, San Francisco, California.
4) Thomas, R. J., R. T. Clancy and K. H. Rosenlof, Two-day waves observed in SME ozone above .01 mb, Presentation at the Fall meeting of the American Geophysical Union, Dec. 1988, San Francisco, California.
5) Rosenlof, K. H., J. R. Holton, Residual circulation calculated from UKMO height data, Presentation at the Eighth Conference on the Middle Atmosphere, American Meteorological Society, Jan. 5-10, 1992, Atlanta, Georgia.

6) Rosenlof, K. H., J. R. Holton, Residual mean meridional circulation calculated using the downward control principle, Presentation at the Fall meeting of the American Geophysical Union, Dec. 1992, San Francisco, California.
7) Rosenlof, K. H., Seasonal cycle in estimates of the residual mean meridional circulation, Presentation at the Ninth Conference on the Middle Atmosphere, American Meteorological Society, Jun. 6-10, 1994, Monterey, California.
8) Rosenlof, K. H., P. W. Mote, J. R. Holton, R. S. Harwood, J. W. Waters, Seasonal variations of water vapor in the tropical lower stratosphere, Presentation at the AGU Chapman Conference on Water Vapor in the Climate System, Oct. 25-28, 1994, Jekyll Island, Georgia.
9) Rosenlof, K. H., P. W. Mote, E. S. Carr, R. S. Harwood, J. S. Kinnersley, M. E. McIntyre, J. M. Russell III, The imprint of tropical tropopause temperatures on lower stratospheric water vapor, Presentation at the Spring meeting of the American Geophysical Union, May 30-June 2, 1995, Baltimore, Maryland.
10) Rosenlof, K. H., E. Yulaeva, M. J. Alexander, Summer hemisphere differences in temperature and transport in the lower stratosphere, Presentation at the International Union of Geodesy and Geophysics, XXI General Assembly, Jul. 2-14, 1995, Boulder, Colorado.
11) Mote, P. W., E. S. Carr, R. S. Harwood, J. S. Kinnersley, K. H. Rosenlof, M. E. McIntyre, J. M. Russell III, The imprint of tropical tropopause temperatures on lower stratospheric water vapor, Presentation at the International Union of Geodesy and Geophysics, XXI General Assembly, July 2-14, 1995, Boulder, Colorado.
12) Rosenlof, K. H., A. F. Tuck, J. M. Russell, III, M. P. McCormick, Hemispheric Asymmetries in stratospheric water vapor, Presentation at the Fall meeting of the American Geophysical Union, Dec.11-15, 1995, San Francisco, California.
13) Alexander, M. J., K. H. Rosenlof, Estimates of gravity wave drag in the Southern Hemisphere and effects on lower stratospheric temperatures, Presentation at the Fall meeting of the American Geophysical Union, Dec.11-15, 1995, San Francisco, California.
14) Rosenlof, K. H., A. F. Tuck, K. K. Kelly, J. M. Russell III, M. P. McCormick, Hemispheric asymmetries in water vapor and inferences about transport in the lower stratosphere, Presentation at the First SPARC (Stratospheric Processes and Their Role in Climate) General Assembly, December 2-6 1996, Melbourne, Australia.
15) Rosenlof, K.H., A. F. Tuck, Evidence for tropical-middle latitude mass transport associated with a tropical storm, Presentation at the 22nd Conference on Hurricanes and Tropical Meteorology, May 19-23 1997, Fort Collins, Co. (preprint volume pg. 497-498)
16) Rosenlof, K.H., A. F. Tuck, Evidence for tropical-middle latitude mass transport associated with a tropical storm, Presentation at the 10th Conference on the Middle Atmosphere, American Meteorological Society, June 23-27 1997, Tacoma, Wa.
17)* Rosenlof, K. H., A. F. Tuck, K. K. Kelly, S. J. Oltmans, H. Vömel, J. M. Russell, M. P. McCormick, R. D. May, Water vapor trends in the lower stratosphere, Spring meeting of the American Geophysical Union, May 26-29, 1998, Boston, Mass.
18)* Rosenlof, K. H., Water vapor in the upper troposphere and lower stratosphere: A comparison of recent satellite, aircraft and balloon measurements, SPARC (Stratospheric Processes and Their Role in Climate) Workshop on UTLS Water Vapor, August 26-28, 1998, Boulder, Co.
19) Rosenlof, K. H., Estimates of the seasonal cycle of mass and ozone transport at high northern latitudes during POLARIS, Presentation at the Fall meeting of the American Geophysical Union, Dec. 6-10, 1998, San Francisco, Ca.
20)* Rosenlof, K. H., Water vapour trends in the lower stratosphere: What are the dynamical

implications?, International Union of Geodesy and Geophysics, XXII General Assembly, July 18-30, 1999, Birmingham, England, UK.

21)* Rosenlof, K. H., Water vapor trends in the lower stratosphere,Chapman Conference on Water Vapor in the Climate System, October 12-15, 1999, Potomac, Maryland.

22) Rosenlof, K. H., Water vapour trends in the lower stratosphere: what are the dynamical implications? Brewer-Dobson Workshop (WCRP/SPARC), 13-15 December 1999, Oxford, England, U.K.

23) Rosenlof, K. H., An examination of stratospheric circulation changes over the UARS record, Presentation at the Spring meeting of the American Geophysical Union, May 30-June 3, 2000, Washington, D.C.

24) Rosenlof, K. H., S. J. Oltmans, Comparisons of water vapour measurements and derived quantities in the UT/LS: a summary from the SPARC Water Vapour Assessment, Presentation at the Second SPARC (Stratospheric Processes and Their Role in Climate) General Assembly, November 6-10, 2000, Mar del Plata, Argentina.

25)* Rosenlof, K.H., Long-term stratospheric water changes deduced from multiple sources: What does this imply about tropical troposphere-stratosphere transport? Workshop on "Coupling of the Troposphere and Stratosphere by Dynamical, Radiative and Chemical Processes", March 13-17, 2001, Kyoto, Japan.

26)* Rosenlof. K.H., Global structure and transport related to stratospheric water vapor observations. SPARC (Stratospheric Processes and Their Role in Climate) tropopause workshop, April 17-21, 2001, Bad Tölz, Germany

27)* Rosenlof, K. H., Global Transport Features Deduced from Stratospheric Water Vapor Observations, presentation at the Gordon Conference on Atmospheric Chemistry, Salve Regina University, June 17-22, 2001, Newport, RI.

28)* Rosenlof, K. H., J. M. Russell III, J. Anderson, HALOE Long-term Observations of Ozone and Related Gases, International Geoscience and Remote Sensing Symposium IGARSS 2001), July 9-13, 2001, Sydney, Australia.

29) Kelly, K. K., K. H. Rosenlof, H. Vömel, R. L. Herman, Intercomparison of water vapor measurements taken during the ACCENT mission, Presentation at the Fall meeting of the American Geophysical Union, December 10-14, 2001, San Francisco, California.

30) Rosenlof, K. H., Changes in tropical upwelling a possible cause for increases in stratospheric water vapor?, Presentation at the 12th Conference on the Middle Atmosphere, American Meteorological Society, November 4-7, 2002, San Antonio, Texas.

31) Rosenlof, K. H., Stratospheric water vapor, short presentation at the SPARC/IGAC workshop on climate-chemistry interaction, April 2-6, 2003, Giens, France.

32) Rosenlof, K. H., S. J. Oltmans, W. Randel, Recent changes in lower stratospheric water vapor, Presentation at the EGS-AGU-EUG Joint Assembly, April 6-11, 2003, Nice, France.

33) Ray, E. A., K. H. Rosenlof, E. C. Richard, D. Parrish, R. Jakoubek, Ozone in the sub-tropical upper troposphere and lowermost stratosphere: An analysis of in-situ aircraft measurements, Presentation at the EGS-AGU-EUG Joint Assembly, April 6-11, 2003, Nice, France.

34) Ray, E. A., K. H. Rosenlof, R. Herman, Large-scale transport in the 2002 summer subtropical UT/LS, Presentation at the EGS-AGU-EUG Joint Assembly, April 6-11, 2003, Nice, France.

35) Richard, E. C., E. A. Ray, K. H. Rosenlof, H. Jost, M. Lowenstein, The distribution and variability of ozone in the sub-tropical upper troposphere and lower stratosphere during CRYSTAL-FACE, Presentation at the EGS-AGU-EUG Joint Assembly, April 6-11, 2003, Nice, France.

36)* Rosenlof, K. H., Changes in tropical upwelling: A possible cause for changes in stratospheric water vapor, International Union of Geodesy and Geophysics, XXIII General Assembly, June 30-July 11, 2003, Sapporo, Japan.

37) Rosenlof, K. H., What are the changes in stratospheric water vapor? Presentation at the 2004 AGU/CGU/SEG EEGS Joint Assembly, 17-21 May, 2004, Montreal, Canada.

38) Rosenlof, K. H., What are the changes in stratospheric water vapor? Presentation at the SOWER meeting, 10-15 July 2004, San Cristóbal, Ecuador.

39)* Rosenlof, K. H., Water vapor observations during the Jan 2004 Pre-AVE WB57-F Aircraft Experiment based in Costa Rica, Presentation at the SOWER meeting, 10-15 July 2004, San Cristóbal, Ecuador.

40)* Rosenlof, K. H., Changes in Stratospheric Water Vapor, Presentation at the SPARC 3rd General Assembly, 1-6 August 2004, Victoria, B.C., Canada.

41)* Rosenlof, K. H., Large-scale circulation impacts on the UT/LS, Presentation at the SPARC-IGAC Workshop on Processes governing the chemical composition of the mid-latitude UTLS, May 18-20, 2005, Mainz, Germany.

42) Rosenlof, K. H., Changes in stratospheric water vapor, Presentation at the 13th AMS Conference on the Middle Atmosphere, June 13-17, 2005, Cambridge, Massachusetts

43)* Rosenlof K. H., Changes in stratospheric water vapor: Observations, uncertainties and possible mechanisms, presentation at the NERC UTLS OZONE and CWVC Workshop on Water Vapour in the UTLS, July 5-7, 2005, Lancaster, UK.

44)* Rosenlof, K. H., Changes in stratospheric water vapor, Presentation at IAMAS 2005, August 2-11, 2005, Beijing, China

45) Rosenlof, K. H., Stratospheric water vapor changes, Gordon Conference on Atmospheric Chemistry, September 4-9, 2005, Big Sky, MT.

46)* Rosenlof, K. H., Variability in stratospheric water vapor, Presentation at the James Holton Symposium, American Meteorological Society Annual Meeting, Jan 29 - Feb 2, 2006, Atlanta, Georgia.

47) Rosenlof, K. H., G. C. Reid, Tropical UTLS temperature and water vapor changes, Presentation at the 2006 Joint Assembly (Spring meeting of the American Geophysical Union), 23-26 May, 2006, Baltimore, Maryland.

48) Rosenlof, K. H., Changes in stratospheric water vapor and temperatures since late 2000, Presentation at the Third International SOWER meeting, 11-13 July 2006, Kyukamura Shikotsu, Lake Shikotsu, Chitose, Japan.

49) Rosenlof, K. H., E. C. Ray, Impact of tropical storms on UT water vapor, Presentation at the Third International SOWER meeting, 11-13 July 2006, Kyukamura Shikotsu, Lake Shikotsu, Chitose, Japan.

50) Rosenlof, K.H., G. C. Reid, Tropical UTLS Temperature and Water Vapor Changes, Joint IGAC/CACGP/WMO Symposium, 18-22 September, 2006, Cape Town, South Africa

51) Rosenlof, K.H. and E. A. Ray, Impacts of tropical cyclones on the upper troposphere, Presentation at the Fall meeting of the American Geophysical Union, December 11-15, 2006, San Francisco, California

52) Rosenlof, K.H. and G. C. Reid, Temperatures Trends in the Tropical Lower Stratosphere, Presentation at the AMS joint 14th Conference on Middle Atmosphere and 15th Conference on Air-Sea Interaction, 20-24 August, 2007, Portland, Oregon

53)* Rosenlof, K.H, Long-term trends in temperature and water vapour in the tropical lower stratosphere, Reunion Island International Symposium, 5-9 November, 2007, Hermitage, Saint-Gilles les Bains, Reunion Island, France.

54) Rosenlof, K.H., and E. Ray, An analysis of the synoptic situation during TC-4, Presentation at the Fall meeting of the American Geophysical Union, December 10-14, 2007, San Francisco, California.
55) Rosenlof, K.H. and G. Reid, "Trends in the temperature and water vapor content of the tropical lower stratosphere", poster at the 4th SPARC General Assembly Aug. 31 - Sep 5, 2008 Bologna, Italy.
56) K.H. Rosenlof, Continuation of Trends in Stratosphere Water Vapor and Ozone, CEOS ACC-3 Workshop, October 15-17, 2008, GISS, New York, New York (and contributed to the Report of the Atmospheric Composition Constellation Workshop on the Impact of Data Gaps on Climate Modeling Validation and Forecasts, Recommendations to the COES Agencies, edited by E. Hilsenrath, published October 2008.)
57) K. H. Rosenlof, Related Changes in Tropical Tropopause Temperatures and Stratospheric Water Vapor Input, AGU Chapman Conference on Atmospheric Water Vapor and Its Role In Climate, Kailua-Kona, Hawaii, , October 20-24, 2008,
58) K. Rosenlof, G. Reid, and S. Davis, Changes in the tropical tropopause region, EGU General Assembly, April 19-24, 2009, Vienna, Austria (abstract EGU2009-6125).
59) K.H. Rosenlof, S. Davis, E. Ray, G. Reid, S. Oltmans, D. Hurst, H. Voemel, Changes in Stratospheric Water on Long-term and Seasonal Time Scales, and the Relation to Dynamical Parameters in the UTLS, MOCA-09 General Assembly (IAMAS), July 19-29, 2009, Montreal, Canada.
60) K. Rosenlof, P. Hoor, N. Livesey: Summary of Session 4, NCAR UTLS Workshop (The Extra-tropical UTLS: observations, concepts and future directions), Oct 19-22 2009
61) Rosenlof, K., S. Davis, E. Ray, Variability and Trends in Effective Diffusivity in the Stratosphere, EGU Spring meeting 02-07 May 2010, Vienna
    Also presented: Ray, E., R. Moore, K. Rosenlof, S. Davis, A. Engel, Evidence for Stratospheric Circulation Changes Over the Past Three Decades From Multiple Measurement Sources
    And: S. Davis and K. Rosenlof, Changes in the tropical belt and their effect on trace gas distributions in the UTLS
62) Meeting of the Americas 8-12 Aug 2010, Meeting of the Americas, Foz do Iguassu, Brazil
    i) Rosenlof, K.H, R. W. Portmann, J. S. Daniel, S. M Davis, T.J. Sanford, G-K Plattner, Contributions of Stratospheric Water Vapor to Decadal Changes in the Rate of Global Warming
    ii) Rosenlof, K.H., E.A. Ray, F.L. Moore, S. M. Davis, H. Boenish, Analysis of stratospheric circulation changes using measurements and a tropical leaky pipe model
63) Davis, S.M. and K.H.Rosenlof, Progress towards a merged satellite upper tropospheric and stratospheric water vapor data set and its use in assessing the radiative impact of water vapor changes, Poster at the Aura science team meeting, 2010, Sept 27-29, Boulder, Co.
64) Rosenlof, K.H., E.A. Ray, Aircraft/Satellite comparisons from the HIPPO and GloPac campaigns, A-Train Symposium, Oct 25-18, 2010, New Orleans, LA.
65) Rosenlof, K.H., S. M. Davis, J. Anderson, D. F. Hurst, S. J. Oltmans, An upper tropospheric and stratospheric water vapor data set produced by combining records from multiple satellite platforms, Poster at Fall AGU, San Francisco, CA, 13-17 Dec 2010
66) Rosenlof, KH, S. Davis, P. Young, D. Hurst, Update on Stratospheric Water Changes, oral presentation at the Global Monitoring Annual Conference, NOAA ESRL, Boulder, CO, May 17-18, 2011

67) Rosenlof, KH, T. Peter, C. Schiller, SPARC water vapor assessment: establishing steps for producing a climate data record for upper tropospheric and stratospheric water vapor, oral presentation at the WCRP OSC, Denver, CO, October 24-28, 2011.
68) Karen H. Rosenlof; Sean M. Davis; Paul J. Young,presentation A43C-0148. Coupled Circulation Anomalies during the 2010/2011 Northern Hemisphere Winter. 2011 Fall AGU meeting, Dec 5-11, 2011, San Francisco, CA:
69)* Rosenlof, K.H., Satellite based zonally averaged time series of stratospheric water vapor PMC Trends Workshop, LASP, University of Colorado, May 3-4, 2012.
70)* Rosenlof, K.H., The Stratospheric Mean Meridional Circulation as Diagnosed from Reanalyses, SPARC Data Assimilation Workshop, Jun 11-13, 2012, Socorro, NM.
71)* Rosenlof, K.H., In-Situ Aircraft Observations, U.S. - Japan Bilateral Workshop on the Tropical Tropopause Layer, Oct 15-19, 2012, East-West Center, University of Hawai'i at Manoa (Honolulu, Hawai'i)
72) Rosenlof, K.H., The NOAA H_2O and O_3 database, presentation at the U.S. - Japan Bilateral Workshop on the Tropical Tropopause Layer, Oct 15-19, 2012, East-West Center, University of Hawai'i at Manoa (Honolulu, Hawai'i)
73) Karen H. Rosenlof; Sean M. Davis; Dale F. Hurst, presentation A31E-0070. Comparison of in situ and satellite water vapor in the lower stratosphere; a means of assessing measurement reliability, 2012 Fall AGU meeting, Dec 2012, San Francisco
74)* Rosenlof, K.H Links between the stratospheric mean meridional circulation, water, ozone and climate, WCRP Regional Workshop on Stratosphere-Troposphere Processes and their Role in Climate, Kyoto University, Kyoto, Japan, April 1-3, 2013.
75)* Rosenlof, K.H., Stratospheric Water Vapor: Trends and Climate Impacts, invited talk at the 535st International Wilhelm and Else Heraeus Seminar: Water Vapor and Ice in the Atmosphere, Bad Honnef / Bonn, Germany, 10 - 14 June 2013 .
76)* Rosenlof, K.H., SPARC WAVAS activity and possible collaborations with GEWEX G-VAP, September 30, 2013, 3rd meeting on the GEWEX Water Vapor Assessment (G-VAP), CIRA, Colorado State University, Fort Collins, CO.
77) Rosenlof, K.H., SPARC Water Vapor Assessment II, Aims and Scope, Dec. 3, 2013, SPARC WAVAS II workshop, Jet Propulsion Laboratory, Pasadena, Ca.
78) Rosenlof, K.H., and S. M. Davis, The SWOOSH Merged data set, Dec. 5, 2013, SPARC WAVAS II workshop, Jet Propulsion Laboratory, Pasadena, Ca.
79)* Rosenlof, K.H., Stratospheric Constituents and Circulation, SPARC lecture, Theme 4: Observational datasets, reanalysis and attribution studies, Jan 17, 2014, SPARC 2014 General Assembly, Queenstown, New Zealand.
80) Rosenlof, K.H. (for B. Hassler, N. Harris, K.H. Rosenlof, J. Staehelin, R. Stolarski, I. Petropavlovskik and F. Tummon) Past Changes in the Vertical Distribution of Ozone: The SI^2N Activity and Its Outcome, Earth System Research Laboratory, Global Monitoring Annual Conference, Boulder, CO, May 20-21, 2014.
81) Davis, S.M., and K.H. Rosenlof, The Stratospheric Water Vapor and OzOne Satellite Homogenized (SWOOSH) data set, NOAA Global Monitoring Division Annual Conference, May 21, 2014, Boulder, CO.
82) K Rosenlof & S Evan, TTL cooling and drying during the Januray 2013 Sudden Stratospheric Warming, ATTREX Science Team meeting, Oct 20-23, 2014, Boulder, CO
83) K. Rosenlof et al., A42D-05 Variability and trends in UTLS temperatures and water vapor,
84) K. Rosenlof, S. Davis, R. Neely, B. Hassler, D. Hurst, Variability and trends in UTLS temperatures and water vapor, 26th IUGG General Assembly, 26 June 2015, Prague, Czech Republic

85)* Karen Rosenlof, Sean Davis, Ryan Neely, Amy Butler and Dale Hurst, Variability and trends in UTLS temperatures and water vapor, Workshop on the Water Budget in the Tropical Tropopause Layer, July 1-3, 2014, Universite De Reims, Campagne-Ardenne, France

86)* Rosenlof, K.H., What do we know about past changes in the latitudinal extent of the tropics? - An incomplete understanding, July 28, 2015, AGU Chapman Conference, The Width of the Tropics, Climate Variations and Their Impacts, Santa Fe, NM.

87) K. Rosenlof, R. Neely, S. Davis, A. Butler, D. Hurst, A32F-02, Stratospheric Water Vapor, Tropical Tropopause Temperatures and Tropical Upwelling 2015 AGU Fall Meeting, 14-18 Dec, San Francisco CA

88) K. Rosenlof, Variability and trends in UTLS temperatures and water vapor, presentation 4.2 in the Marvin Geller Symposium 2016 AMS Annual Meeting (96th), 10-14 Jan, New Orleans

89) K. Rosenlof, C. Cagnazzo, L Pan, rapporteur summary, Workshop on dynamics, transport and chemistry of the UTLS Asian monsoon, March 7-11, 2016, NCAR, Boulder, CO

90)* K. Rosenlof, The SPARC Water Vapour Assessment II, SPARC Workshop SHARP2016,

91) K. Rosenlof, D. Hurst and the WAVAS team, SPARC Water Vapor Assessment II

92) K. Rosenlof, M. Avery, S. Davis, R-S Gao, T. Thornberry, A43C-0227: Lower stratospheric observations from aircraft and satellite during the 2015/2016 El Nino Pacific Oxidants, Sulfur, Ice, Dehydration, and cONvection (POSIDON) Experiment 2016 AGU Fall Meeting, 12-16 Dec, San Francisco CA

93)* K. H. Rosenlof, #4.1, Upper Tropospheric and Lower Stratosphere Water Vapor Observations from Satellite, Balloon and Aircraft: What Have We Learned over the Past 70 Years? (Upper Tropical Upper Troposphere Water Vapor, Clouds and Stratospheric Dehydration, 19th Conference on Atmospheric Chemistry) American Meteorological Society Annual Meeting, 22-26 January 2017, Seattle, Wa

94) Karen H. Rosenlof, M. A. Avery, S. M. Davis, H. Ye, and A. E. Dessler, Large Anomalies in Lower Stratospheric Water Vapor and Ice During the 2015-2016 El Niño, American Meteorological Society, 19th Conference on Middle Atmosphere, 25-30 June 2017, Portland, OR

95)* K.H. Rosenlof, Changes in stratospheric water vapor and aerosols and their relation to ozone, Symposium for the 30th Anniversary of the Montreal Protocol, 19-20 September 2017, Fondation Del Duca, Paris, France.

96) K.H. Rosenlof, E. A. Ray, R.W. Portmann, A21I-2279 Is There Evidence that Mid-Latitude Stratospheric Ozone Depletion Occurs in Conjunction with North American Monsoon Convection? 2017 AGU Fall Meeting, December 11-16, New Orleans, LA.

97) K.H. Rosenlof, Is There Evidence that Mid-Latitude Stratospheric Ozone Depletion Occurs in Conjunction with North American Monsoon Convection? The UTLS: Current Status and Emerging Challenges, Feb 5-8, 2018, Johannes Gutenberg University, Mainz, Germany.

98) Karen Rosenlof; Eric Jensen; Troy Thornberry, A proposed stratospheric aerosol aircraft mission: ACCLAIM, The UTLS: Current Status and Emerging Challenges, Feb 5-8, 2018, Johannes Gutenberg University, Mainz, Germany

99) D. Hurst, S. Davis, K.H. Rosenlof, W. Read, E. Hall, A. Jordan, Anomalously Strong and Rapid Drying of the Tropical Lower Stratosphere in 2016: Connections to the QBO and ENSO, EGU General Assembly, 2018, 8-13 April, Vienna, Austria.

100) K. H. Rosenlof and G. Stiller, SPARC WAVAS Overview, EGU General Assembly, 2018, 8-13 April, Vienna, Austria.

101) S.M. Davis and K.H. Rosenlof, Improved uncertainty estimates in the SWOOSH merged set and implications for understanding long-term water vapor variability, EGU General Assembly, 2018, 8-13 April, Vienna, Austria.

102) K.H. Rosenlof, S.M Davis, D. Hurst, A241I-2085, Lower Stratospheric Ozone Variability, 2018 AGU Fall Meeting, December 10-14, Washington DC.
103) K.H. Rosenlof, D. Hurst, S.M. Davis, R. Portmann, N. Davis, IUGG19-3982, Lower Stratospheric Ozone Variability and Trends, 27th IUGG General Assembly, July 8-18, 2019, Montreal, Canada.
104) K.H. Rosenlof and S.M. Davis, SWOOSH, a long-term database for climate studies, Aura Science Team meeting, August 24-26, 2019, Pasadena, CA.
105)*K.H. Rosenlof, The stratospheric mean meridional circulation, Middle Atmosphere One-Day Symposium, AMS Annual Meeting (100th), Jan 14, 2020, Boston, MA.
106) K.H.Rosenlof, R-S Gao, T. Thornberry, A. Rollins, P. Hall, J. Waker, HAPS (High Altitude Pseudo Satellite) UAS for Atmospheric Research—Demonstration and Outlook, poster at Middle Atmosphere One-Day Symposium, AMS Annual Meeting (100th), Jan 14, 2020, Boston, MA.
107)*K.H. Rosenlof, Stratospheric ozone changes and its influence on climate, 2020 Sun-Climate Symposium, Jan. 27–31, Tucson, AZ.
108) K.H. Rosenlof, R-S Gao, P. Yu, A variation on a stratospheric aerosol injection scheme for climate intervention, 2020 AGU Fall Meeting, December 1-17, online.
109)*K.H.Rosenlof, Tonga Rapid Response Experiment (TR2Ex), SSIRC meeting, 3rd International Workshop on Stratospheric Sulfur and its Role in Climate (SSiRC), 16-18 May, 2022, Leeds, UK
110)*K.H.Rosenlof, Strospheric Measureent Campaigns, Aircraft and Balloon Borne In Situ Sampling: What Do We Hope to Learn?, Processes and Impacts of Radiation Management Approaches to Climate Change, Climate Engineering Gordon Research Conference, 26 June-1 July 2022, Newry, ME.
111) K.H. Rosenlof, Revisiting a trace gas-based tropical width metric, ISSI TWIST workshop (online), March 28-31, 2022.
112) K.H. Rosenlof, Hunga Tonga Impact, ISSI TWIST online presentation, Oct. 12, 2022
113) K.H. Rosenlof, S-W Soon, A. Maycock, M Heckl, Update on Stratosphere-troposphere Processes And their Role in Climate (SPARC), WGNE-37 and WGCM-25, NCAR, Boulder, CO, Nov 8 2022.
114) K.H. Rosenlof, Introductory remarks, 7th SPARC General Assembly, Boulder CO Hub, Oct. 24, 2022 (Joint with Reading Hub)
115) K. H. Rosenlof, Closing Remarks, 7th SPARC General Assembly, Boulder CO Hub, Oct. 28, 2022 (Joint with Reading Hub)
116) K.H. Rosenlof, Tonga Rapid Response Experiment (TR2Ex), GRUAN ICM-14, La Réunion, Nov 29, 2022
117) K. H. Rosenlof, Panel Introduction and Moderator, Impact of Space Endeavors on Earth's Climate and Atmosphere, EXPL-20, SciTech 2023, National Harbor, MD, Jan 27, 2023
118)*K.H.Rosenlof, The 2022 Hunga Tonga-Hunga Ha'apai Eruption: NOAA's Rapid Response (invited keynote) , 2023 Global Monitoring Annual Conference, Boulder, CO, May 23, 2023
119)*K.H. Rosenlof, Processes and Analogs, invited over 6-8 November 2023: Earth's Radiation Budget Science Meeting, Boulder, CO, invited overview presentation, Processes and Analogs (https://csl.noaa.gov/research/erb/meetings/202311/)
120)*K.H. Rosenlof, A32D-02, Stratosphere Water Vapor Observations from Satellite, Balloon and Aircraft: What Have We Learned over the Past 75 Years?American Geophysical Union annual meeting, San Francisco, CA, 11-15 December 2023 (https://agu.confex.com/agu/fm23/meetingapp.cgi/Paper/1494363)

121) K.H. Rosenlof, Technical panel presentation, Overview of Space Industry Emissions Research in NOAA's Earth Radiative Budget Initiative AIAA SciTech Forum, Orlando, FL, 8-12 January 2024
122) K.H. Rosenlof, The Need for Continued Stratospheric Water Vapor Measurements, American Meteorological Society annual meeting, Conference on Climate Variability and Change, Baltimore, MD, 28 January-1 February, 2024 (https://ams.confex.com/ams/104ANNUAL/meetingapp.cgi/Paper/437268)
123) K.H. Rosenlof & C. Maloney, Potential impacts of launch and orbital debris re-entry emissions, EGU General Assembly 2024, Vienna, Austria, 14-19 April 2024
124) K.H. Rosenlof, Stratospheric Water Vapor: What it has Taught Us, and Why Measurements Should Continue, AMS 22nd Conference on Middle Atmosphere, Burlington, VT, 24-28 June, 2024
125) K.H. Rosenlof, Rocket launches and satellite re-entry: Initial findings and the need for observational constraints given projections of a rapidly increasing number of low earth orbit large satellite constellations, Quadrennial Ozone Symposium, Boulder, CO, 14-19 July 2024