Curriculum Vitae

Peter Pilewskie
University of Colorado
Laboratory for Atmospheric and Space Physics
Department of Atmospheric and Oceanic Sciences
3665 Discovery Dr.
Boulder, CO 80303-7819
peter.pilewskie@lasp.colorado.edu

Education

B.S., Meteorology, Pennsylvania State University, 1983
M.S., Atmospheric Science, University of Arizona, 1986
Ph.D., Atmospheric Science, University of Arizona, 1989

Professional Experience

Professor, University of Colorado, Laboratory for Atmospheric and Space Physics, Department of Atmospheric and Oceanic Science, 2009-present
LASP Assistant Director for Science, Earth Atmosphere, 2020-2021
Director, LASP/NASA Goddard Sun-Climate Research Center, 2010-present
Associate Professor, University of Colorado, Laboratory for Atmospheric and Space Physics, Department of Atmospheric and Oceanic Science, 2004-2009
Radiation Group Leader, Atmospheric Physics Branch, NASA Ames Research Center, 1994-2004
Lecturer, San Jose State University, Department of Meteorology, 2000-2003
Research Scientist, Atmospheric Physics Branch, NASA Ames Research Center, 1989-1994
Research Assistant, Institute of Atmospheric Physics, University of Arizona, 1983-1989

Professional Activities

Member, National Academies of Sciences, Engineering, and Medicine Committee on Earth Sciences and Applications from Space, 2022-present
IUGG Liaison Officer, 2023-present
Principal Investigator, NASA *Libera* Mission, 2020-present
President of the IAMAS International Radiation Commission (IRC), 2020-present
Bureau Member, Scientific Committee on Solar-Terrestrial Physics (SCOSTEP), 2019-present.
Principal Investigator, CLARREO Pathfinder Mission, 2016-present
Deputy Secretary General, International Association of Meteorology and Atmospheric Sciences (IAMAS), 2015-2018
Secretary/Vice-president of the IAMAS International Radiation Commission (IRC), 2012-2020
Principal Investigator, NASA Total and Spectral Solar Irradiance Sensor (TSIS), 2005-2020
Member, NASA Living With a Star Targeted Research & Technology Program Steering Committee, 2011-2015.
Member, Committee on *The Effects of Solar Variability on Earth's Climate: A Workshop, Space Studies Research Board*, National Research Council, 2011-2012
Member, IAMAS International Radiation Commission (IRC), 2009-present

Member, Climate Absolute Radiance and Refractivity Observatory Decadal Survey Mission Science Working Group, 2008-2016
Member, Aerosol, Cloud, and Ecosystem (ACE) Decadal Survey Mission Science Working Group, 2008-present
Member of the European Fleet for Airborne Research (EUFAR), 2006-present.
Member, National Research Council Space Studies Board (SSB), Committee on Large Optical Systems in Space, 2005-2007
Member, Steering Committee, Achieving Satellite Instrument Calibration for Climate Change, ASIC3, 2005-2007
Member, Review Panel for the Marine Meteorology Division of Naval Research Laboratory Monterey, Science and Technology Program, 2006
Member, Science Program Organizers, SORCE Science Meeting, 2003, 2006
Member, Solar Radiation and Climate Experiment (SORCE), 1999-present
Member, Triana/DSCOVR Science Team, 1998-2004
Member, NASA New Investigator Program NRA review panel, 2004, 2012.
Member, NASA Radiation Science Program NRA review panel, 2003
Mentor, ARM Shortwave Spectrometer, 2001-present
Member, Atmospheric Radiation Measurement Program (ARM) Science Team, 1997-present
Member, The Cirrus Regional Study of Tropical Anvils and Cirrus Layers - Florida Area Cirrus Experiment (CRYSTAL-FACE) Science Team, 2001-present
Member, Southern African Regional Science Initiative –2000 Science Team
Member, Chapman Conference on Atmospheric Absorption of Solar Radiation Program Committee, 2001
Member, Atmospheric Radiation Measurement (ARM) Enhanced Shortwave Experiment (ARESE) II Science Team
Member, Total Solar Irradiance Mission Science and Technical Approach evaluation panel, 1998
Member, International Global Atmospheric Chemistry (IGAC), Focus on Atmospheric Aerosols, Direct Aerosol Radiative Forcing Activity, 1995-1999
Member, First International Satellite Cloud Climatology Program (ISCCP) Regional Experiment, Phase III (FIRE III) Science Team, 1994-2000
Science Team Leader, International Global Aerosol Program (IGAP), Radiative Effects of Aerosols, 1993

Professional Honors

Elected President of the IAMAS International Radiation Commission (IRC), 2020
Elected to SCOSTEP Bureau, 2019
American Meteorological Society Fellow, 2018
Elected Vice-president of the IAMAS International Radiation Commission (IRC), 2016
NASA Group Achievement Award, TSIS, 2018
NASA Group Achievement Award, ATTREX, 2016
NASA Langley Henry J.E. Reid Award, 2015
NASA Group Achievement Award, SORCE Return to Science, 2014
NASA Robert H. Goddard Exceptional Achievement Award, LASP TCTE Team, 2013
NASA Group Achievement Award, SEACRS, 2013
Elected Secretary of the International Radiation Commission (IRC), 2012
NASA Group Achievement Award, CLARREO Mission Concept Team, 2012
Humboldt Research Award, Alexander von Humboldt Foundation, 2011

NASA Group Achievement Award, Glory Project Team, 2011
Elected to the International Radiation Commission (IRC), 2009
NASA Group Achievement Award, ARCTAS, 2009
NASA Group Achievement Award, TC4 Science Team, 2008
NASA Group Achievement Award, ICTE, 2007
NASA Group Achievement Award, INTEX-NA Science Team, 2005
NASA Group Achievement Award, CRYSTAL-FACE Science Team, 2003
NASA Exceptional Scientific Achievement Medal, 1997
NASA Group Achievement Award, FIRE Phase II Science and Operations Team, 1997
NASA Ames Honor Award, Scientist, 1995
NASA Ames Outstanding Performance Award, 1990

Peer Reviewed Publications (student and postdoc advisee first authors in bold)

Hakuba, M.Z., Fourest, S., Boyer, T. *et al.* (including P. Pilewskie), Trends and Variability in Earth's Energy Imbalance and Ocean Heat Uptake Since 2005. *Surv Geophys* **45**, 1721–1756 (2024). https://doi.org/10.1007/s10712-024-09849-5

Richard E, Coddington O, Harber D, Chambliss M, Penton S, et al. . (including P. Pilewskie), 2024. Advancements in solar spectral irradiance measurements by the TSIS-1 spectral irradiance monitor and its role for long-term data continuity. *J. Space Weather Space Clim.* **14**, 10. https://doi.org/10.1051/swsc/2024008.

Brendecke, Jordann , Xiquan Dong, Baike Xi, Xiang Zhong, Jiangnan Li, Howard W. Barker, Peter Pilewskie, Evaluation of clear-sky surface downwelling shortwave fluxes computed by three atmospheric radiative transfer models, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 328, 2024, 09164, SSN 0022-4073, https://doi.org/10.1016/j.jqsrt.2024.109164.

Zhong, Xiang, Xiquan Dong, Baike Xi, Jordann Brendecke, Peter Pilewskie, Tracing the physical signatures among the calculated global clear-sky spectral shortwave radiative flux distribution, Journal of Quantitative Spectroscopy and Radiative Transfer, Volume 328, 2024, 109167, ISSN 0022-4073, https://doi.org/10.1016/j.jqsrt.2024.109167.

Bais, Alkiviadis F., Peter Pilewskie, Manfred Wendisch; Preface, The international radiation symposium 2022. AIP Conf. Proc. 18; 2988 (1): 010001. https://doi.org/10.1063/12.0022033 (2024)

National Academies of Sciences, Engineering, and Medicine. Assessment of Commercial Space Platforms for Earth Science Instruments: Report Series—Committee on Earth Science and Applications from Space. Washington, DC: The National Academies Press. https://doi.org/10.17226/27019 (2023)

Gristey, J. J., Schmidt, K. S., Chen, H., Feldman, D. R., Kindel, B. C., Mauss, J., van den Heever, M., Hakuba, M. Z., and Pilewskie, P.: Angular sampling of a monochromatic, wide-field-of-view camera to augment next-generation Earth radiation budget satellite observations, Atmos. Meas. Tech., 16, 3609–3630, https://doi.org/10.5194/amt-16-3609-2023, 2023.

Coddington OM, Richard EC, Harber D, Pilewskie P, Woods TN, Snow M, Chance K, Liu X, Sun K. Version 2 of the TSIS-1 Hybrid Solar Reference Spectrum and Extension to the Full Spectrum. Earth and Space Science. 10 (3) (March 01, 2023): ARTN e2022EA002637.

White M. G., K. Heuerman, P. S. Shaw, M. S. Stephens, N. A. Tomlin, C. Yung, J. H. Lehman, J. Rice, J. Rutkowski, C. Straatsma, P. Pilewskie, E. Richard and D. Harber, Decadal validation of the LASP TRF cryogenic radiometer by NIST, and establishment of a replacement room temperature standard. 2022 Metrologia, 59, 065006 DOI 10.1088/1681-7575/ac89f5 (2022).

Shea, Y. L., Lukashin, C., Liu, X., Feldman, D. R., & Pilewskie, P., An entropy framework for evaluating reflectance observations for climate studies. Earth and Space Science, 9, e2019EA000795. https://doi.org/10.1029/2019EA000795 (2022).

Stephens, M., C. S. Yung, N. A. Tomlin, D. Harber, C. Straatsma, A. Dan, E., Freire Antunes, P. Pilewskie, O. Coddington, J. H. Lehman, Extremely broadband calibrated bolometers and microbolometer arrays for Earth radiation budget measurements, Proc. SPIE 12234, Infrared Sensors, Devices, and Applications XII, 1223403. doi: 10.1117/12.2633044 (2022)

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Coddington, O. M., Richard, E. C., Harber, D., Pilewskie, P., Woods, T. N., Chance, K., et al., The TSIS-1 Hybrid Solar Reference Spectrum. Geophysical Research Letters, 48, e2020GL091709. https://doi.org/10.1029/2020GL091709 (2021).

Jing, X., X. Huang, X. Chen, D.L. Wu, P. Pilewskie, O. Coddington, and E. Richard, Direct Influence of Solar Spectral Irradiance on the High-Latitude Surface Climate Journal of Climate 34, 10; 10.1175/JCLI-D-20-0743.1(2021).

Wright, L. A., B. C. Kindel, P. Pilewskie, N. P. Leisso, T. U. Kampe and K. S. Schmidt, Below-Cloud Atmospheric Correction of Airborne Hyperspectral Imagery Using Simultaneous Solar Spectral Irradiance Observations, IEEE Transactions on Geoscience and Remote Sensing, 59, 2, 1392-1409, , doi: 10.1109/TGRS.2020.3003209 (2021).

Riihimaki LD, Flynn C, McComiskey A, Dan L, Blanchard Y, Chiu JC, Feingold G, Feldman DR, Gristey JJ, Herrera C, Hodges G, Kassianov E, LeBlanc SE, Marshak A, Michalsky JJ, Pilewskie P, Schmidt S, Scott RS, Shea1 Y, Thome K, Wagener KR, and Wielicki B, The Shortwave Spectral Radiometer for Atmospheric Science: Capabilities and Applications from the ARM User Facility. Bulleten of the American Meteorological Society, 102 (3),): E539-E554 (2021).

Redemann, J., Wood, R., Zuidema, P., Doherty, S. J., Luna, B., LeBlanc, S. E., Diamond, M. S., Shinozuka, Y., Chang, I. Y., Ueyama, R., Pfister, L., Ryoo, J.-M., Dobracki, A. N., da Silva, A. M., Longo, K. M., Kacenelenbogen, M. S., Flynn, C. J., Pistone, K., Knox, N. M., Piketh, S. J., Haywood, J. M., Formenti, P., Mallet, M., Stier, P., Ackerman, A. S., Bauer, S. E., Fridlind, A. M., Carmichael, G. R., Saide, P. E., Ferrada, G. A., Howell, S. G., Freitag, S., Cairns, B., Holben, B. N., Knobelspiesse, K. D., Tanelli, S., L'Ecuyer, T. S., Dzambo, A. M., Sy, O. O., McFarquhar, G. M., Poellot, M. R., Gupta, S., O'Brien, J. R., Nenes, A., Kacarab, M., Wong, J. P. S., Small-Griswold, J. D., Thornhill, K. L., Noone, D., Podolske, J. R., Schmidt, K. S., Pilewskie, P., Chen, H., Cochrane, S. P., Sedlacek, A. J., Lang, T. J., Stith, E., Segal-Rozenhaimer, M., Ferrare, R. A., Burton, S. P., Hostetler, C. A., Diner, D. J., Seidel, F. C., Platnick, S. E., Myers, J. S., Meyer, K. G., Spangenberg, D. A., Maring, H., and Gao, L.: An overview of the ORACLES (ObseRvations of Aerosols above CLouds and their intEractionS) project: aerosol–cloud–radiation interactions in the southeast Atlantic basin, Atmos. Chem. Phys., 21, 1507–1563, https://doi.org/10.5194/acp-21-1507-2021 (2021).

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Mauceri, S., O. Coddington, D. Lyles, and P. Pilewskie, Neural Network for Solar Irradiance Modeling (NN-SIM), Sol. Phys. 294 (11) (2019).
Mauceri S., B. Kindel, S. Massie, P. Pilewskie, Neural network for aerosol retrieval from hyperspectral imagery, Atmos. Meas. Tech., 12 (11), 6017-6036 (2019).
Cochrane S.P., K.S. Schmidt, H. Chen, P. Pilewskie, S. Kittelman, J. Redemann, S. LeBlanc, K. Pistone, M. Kacenelenbogen, M.S. Rozenhaimer , Above-cloud aerosol radiative effects based on ORACLES 2016 and ORACLES 2017 aircraft experiments." Atmos. Meas. Tech., 12 (12), 6505-6528 (2019).
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Stephens G, Freeman A, Richard E, Pilewskie P, Larkin P, Chew C, Tanelli S, Brown S, Posselt D, Peral E, The Emerging Technological Revolution in Earth Observations. Bull. Amer. Meteor. Soc., BAMS-D-19-0146.1. (2019).
Coddington O, Lean J, Pilewskie P, Snow M, Richard E, Kopp G, Lindholm C, Deland M, Marchenko S, Haberreiter M, Solar Irradiance Variability: Comparisons of Models and Measurements, Earth and Space Science (2019).
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Mauceri, S., Pilewskie, P., Richard, E. et al., Sol. Phys. 293: 161. https://doi.org/10.1007/s11207-018-1379-1 (2018).
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Wen, G., R. F. Cahalan, D. Rind, J. Jonas, P. Pilewskie, D. L. Wu, and N. A. Krivova, Climate responses to SATIRE and SIM-based spectral solar forcing in a 3D atmosphere-ocean coupled GCM, J. Space Weather Space Clim., 7, A11, DOI: 10.1051/swsc/2017009 (2017).

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Kren, A. C., D. R. Marsh, A. K. Smith, and P. Pilewskie, Wintertime Northern Hemisphere Response in the Stratosphere to the Pacific Decadal Oscillation Using the Whole Atmosphere Community Climate Model. J. Climate, 29, 1031–1049, doi: 10.1175/JCLI-D-15-0176.1. (2016).

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Selected Invited Lectures, Extended Abstracts, Conference Proceedings, and Workshop Proceedings

Pilewskie, P., The Challenges of Measuring Earth's Energy Imbalance, JPL Center for Climate Sciences Workshop: Earth's Energy Imbalance and Planetary Heat Uptake, 14-15 Feb. 2023, Pasadena, CA.
Pilewskie, P., Libera Science Lightning Talk, 2023 ESSP Program Forum, 22-23 August 2023, NASA Langley Research Center, Hampton, VA
Pilewskie, P. and Hakuba, M. and the Libera Science Team, The Future of Earth Radiation Budget Observations Beyond CERES: Libera and Continuity of the ERB Climate Data Record, AMS Collective Madison Meeting, 8-12 August 2022. Madison, WI.
Pilewskie, P. and Hakuba, M. and the Libera Science Team, Libera and Continuity of the ERB Climate Data Record, AMS Annual Meeting, online, 24 January 2022.
Pilewskie, P., The Future of Earth Radiation Budget Observations from Space: Libera and Continuity of the ERB Climate Data Record. Texas A&M University, 5 October 2022.

Pilewskie, P., Libera's Contributions to ERB Continuity and Advances in Earth's Energy Budget Research. Colorado State University, 17 February 2022.

Pilewskie, P., Measurements of Earth's Radiation Budget from Space. University of Colorado, Aerospace Engineering Sciences, 22 September 2022.

P. Pilewskie, The Atmospheric Greenhouse Effect, Fort Lewis College Life Long Learning Series. 10 March 2022.

Pilewskie, P., AGU Town Hall Update on SCOSTEP's Scientific Program: PRESTO (Predictability of Variable Solar-Terrestrial Coupling) Pillar 3. AGU Fall Meeting, New Orleans, LA. 15 December 2021

Pilewskie, P., Libera Mission Status Update and Synergy with other Missions. CERES Science Team Meeting. 11 May 2021.

Pilewskie, P., Libera Mission Status Update. CERES Science Team Meeting. 13 October 2021.

Pilewskie, Peter, Libera: Continuity of Earth's Radiation Budget Climate Data Record. NIST Boulder Seminar. 18 Dec. 2020.

Pilewskie, P., M. Hakuba and the Libera Science Team, Libera and Continuity of the ERB Climate Data Record. AGU Fall Meeting, 17 December 2020.

Pilewskie, Peter, New Earth-climate Measurements from Space: the Libera Mission. LASP Public Lecture. 11 Nov. 2020.

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Pilewskie, Peter, Libera: Continuity of Earth's Radiation Budget Climate Data Record. ATOC Colloquium, 30 Oct. 2020.

Pilewskie, P., Libera and Continuity of the ERB Climate Data Record. CERES Science Team Meeting. 29 April 2020.

Pilewskie, Peter, The Sun and Earth's Climate from the Maunder Minimum to the Satellite Era, 17 Dec. 2019, Aristotle University, Thessaloniki, Greece

Pilewskie, Peter, and Steffen Mauceri, Advances in Remote Sensing and Climate Monitoring from Shortwave Hyperspectral Observations, AGU Fall Meeting, San Francisco, 9-13 December 2019.

Pilewskie, Peter, The Sun and Earth's Climate from the Maunder Minimum to the Satellite Era, 6 Mar. 2019, Colorado State University, Atmospheric Sciences Colloquium.

Pilewskie, Peter, New Earth Science Missions from Space: Opportunities and Challenges, 21 Mar. 2019, University of Arizona, Earth Dynamics Observatory Colloquium

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Pilewskie, Peter, Advances in remote sensing and climate monitoring from shortwave hyperspectral observations, 6 November 2018, Seoul National University, Seoul, Republic of Korea.

Pilewskie, Peter Sebastian Schmidt, Odele Coddington, and Erik Richard, Advances in remote sensing and climate monitoring from shortwave hyperspectral observations, American Geophysical Union Fall Meeting, 10–14 December 2018, Washington, DC.

Pilewskie, Peter, Greg Kopp, Erik Richard, Odele Coddington, Steffen Mauceri, Tom Sparn and Tom Woods, TSIS-1 and continuity of the total and spectral solar irradiance climate data record, European Geosciences Union General Assembly 2018, Vienna, Austria, 9-13 April 2018.

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Pilewskie, Peter and Tom Sparn, Climate Monitoring from the International Space Station: TSIS and CLARREO Pathfinder. ISS R&D Conference, Washington DC, 17-20 July 2017.

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Pilewskie, Peter, An Overview of the Intra-atmospheric Chain in Sun-Earth-Climate Connections, SCOSTEP 13th Solar-Terrestrial Physics Symposium, Xi'An, China, 12-18 October 2014.

Pilewskie, Peter. Information Content in Remote Sensing: A Perspective on Twomey's Influence on Present and Future Observations, 14th Conference on Atmospheric Radiation, Boston, MA, 7-11 July 2014.

Pilewskie, P., Monitoring Earth's Climate with Shortwave Hyperspectral Reflectance, Gordon Research Conference on Radiation and Climate, Colby-Sawyer College, 8-11 July 2013.

Pilewskie, P., TSIS: The Total and Spectral Solar Irradiance Sensor, 93rd Meeting of the American Meteorological Society, Third Conference on Transition of Research to Operations, 6-10 January 2013, Austin, TX.

Pilewskie, P., An Overview of Historical, Current, and Planned Solar Irradiance Measurements, 4th International HEPPA Workshop, National Center for Atmospheric Research, 9-12 October 2012, Boulder, CO.

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Pilewskie, P., Measurements of Solar Spectral Irradiance, International Space Studies Institute, Observing and modeling Earth's energy flows, Berne, 10-14 Jan., 2011.

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Pilewskie, P., S. Schmidt, O. Coddington, B. Kindel, P. McBride, Advances in quantifying the spectral radiative properties of clouds and aerosols from airborne field studies, IEEE International Geoscience & Remote Sensing Symposium,July 6-11, 2008, Boston.

Pilewskie, P, B. Kindel, K.S. Schmidt, The Impact of Black Carbon on Cloud Radiative Forcing, American Geophysical Union Fall Meeting, 10–14 December 2007, San Francisco.

Pilewskie, P., K.S. Schmidt, O. Coddington, R. Bergstrom, J. Redemann, Advances in Quantifying the Radiative Effects of Aerosol Particles on Climate from Airborne Field Studies, American Geophysical Union Fall Meeting, 10–14 December 2007, San Francisco.

Pilewskie, P., Hyperspectral Solar Spectral Measruements and Applications, The Fourier Transform Spectroscopy and Hypespectral Imaging and Sounding of the Environment Topical Meeting, February 12–15, 2007, Santa Fe, NM.

Pilewskie, P., J. Lean, and T. Woods, SORCE Solar Spectral Irradiance and Climate Modeling Workshop, *The Earth Observer*, **18,** 5 (2006).

Pilewskie, P., Validation of satellite cloud remote sensing via airborne spectral irradiance, International EUFAR Workshop: Combining Upcoming Satellite Missions and Aircraft Activities: Future Challenges for the EUFAR Fleet, Paris, 13-15 September 2006

Lean, J., Pilewskie, T. Woods, and V. George, SORCE 4th Annual Science Team Meeting, *The Earth Observer*, **18,** 6 (2006).

Pilewskie, P., Solar Radiation, Clouds, and Climate: A Multi-Spectral View from the Surface to the Top of the Atmosphere, University of Arizona, November 2006.

Pilewskie, P., SORCE, Glory, TSIS and the Importance of Solar Spectral Variability, Sun-Climate Center Seminar Series, NASA Goddard Space Flight Center, May, 2006.

Pilewskie, P., Solar Radiation, Clouds, and Climate: A Multi-Spectral View from Airborne and Satellite Observations, Texas A&M University, October 2005.

Lean, J., G. Kopp, M. Baldwin, G. Rottman, D. Rind, P. Pilewskie, T. Woods, and R Cahalan, SORCE Science Meeting Addresses "Decadal Variability in the Sun and Climate." *The Earth Observer*, **16,** 6 (2004).

Rottman, G., J. Lean, P. Pilewskie, and R. Cahalen, The Solar Radiation and Climate Experiment (SORCE) 2003 Science Team Meeting. *The Earth Observer*, **16,** 1 (2004).

Pilewskie, P., Coordinated airborne field campaigns, Graduate Student Summer Program in Earth System Science, the Goddard Earth Sciences and Technology Center, Greenbelt, MD. 2003

Pilewskie, P., and M. Rabbette, A moderate resolution view of the spectral absorption of clouds, Chapman Conference on Atmospheric Absorption of Solar Radiation, Estes Park, CO. 2001.

Pilewskie, P., Moderate Resolution solar spectrometry in the clear and cloudy atmosphere, Gordon Research Conference on Solar Radiation & Climate. Plymouth, NH. 1998.

Pilewskie, P., and S. Twomey, Cloud properties derived from surface-based near-infrared spectral transmission. In *IRS '96: Current Problems in Atmospheric Radiation*. W.L. Smith and K. Stamnes, Ed. A. Deepak Publishing. 1997.

Pilewskie, P., A. F.H. Goetz, D. A. Beal, and R. W. Bergstrom, Surface measurements of solar spectral radiative flux in the cloud-free atmosphere. Extended abstracts, Amer. Meteor. Soc Ninth Conf. on Atmospheric Radiation. Long Beach, CA. Feb. 2-7, 1997.

Pilewskie, P., Radiative Properties of Aerosols in *IGAP: A Plan For An International Global Aerosol Program*. P. Hobbs, Ed. 1994.

Pilewskie, P., and Francisco P.J. Valero, Ground-Based Remote Sensing During FIRE IFO II. Extended abstracts, FIRE Cirrus Science Conference, Breckenridge, CO. June 14-17, 1993.

Pilewskie P., Ground-based remote sensing of particle size in ice clouds, Extended abstracts, Amer. Meteor. Soc. Seventh Conf. on Atmospheric Radiation. San Francisco. 1990.

Pilewskie P., Radiative Properties of Liquid Water and Ice Clouds, Annual Meeting of the Optical Society of America. Boston, MA. 1990.

Pilewskie, P., and S. Twomey, 1986: Cloud spectral reflectance in the near-infrared. Extended abstracts, Amer. Meteor. Soc. Sixth Conf. on Atmospheric Radiation. Williamsburg, VA. 1986.

Contributions to National Academy of Science Decadal Survey on Earth Observations

2017

Pilewskie, Peter, et al., Continuing the Total and Spectral Solar Irradiance Data Record: Response to the NAS 2017-2027 Decadal Survey RFI-2 Earth Science Theme: Climate Variability

2007

Hansen, J.E., M. I. Mishchenko, L.D. Travis, R. Burg, Y.J. Kaufman, B. Cairns, G. Rottman, G. Kopp, P. Pilewskie, and V. Martins: NASA Glory Mission (2005)

Wielicki, B., K. Priestley, P. Pilewskie, J. Harder, F. Valero, J. Rice, J. Anderson, M. Mlynczak, J. Harries, W. Wiscombe, D. Siegel, C. McClain, T. Stone, T. Karl, J. Bates, K. Trenberth, and B. Barkstrom: Climate Calibration Observatory: NIST in Orbit (2005)

Contributions to National Academy of Science Decadal Strategy for Solar and Space Physics

Pilewskie, P., G. Kopp, E. Richard, R. Cahalan, and W. F. Denig, The Total and Spectral Solar Irradiance Sensor: Response to the National Academy of Science Decadal Strategy for Solar and Space Physics (2010).

Field Experiments ***(participated on aircraft and/or ground-based platforms)***

Kuwait Oil Fire Experiment	1991
Pinatubo Airborne Mission	1991
FIRE II Cirrus Experiment	1991
Arctic Airborne Stratospheric Experiment II (AASE)	1992
Atlantic Stratocumulus Transition Experiment (ASTEX)	1992
Pilot Radiation Observation Experiment (PROBE)	1992
Tropical Ocean Global Atmosphere-Coupled Ocean Atmosphere Response Experiment (TOGA-COARE)	1993
Central Equatorial Pacific Experiment (CEPEX)	1993
Monterey Area Ship Tracks (MAST)	1994
Sulfates, Clouds, and Radiation-California (SCAR-C)	1994
The Arizona Program, **Principal Investigator**	1995
Subsonic Aircraft: Contrail and Cloud Effects Special Study (SUCCESS), **Principal Investigator**	1996
ARM Shortwave Intensive Operating Period, **Principal Investigator**	1997
FIRE III Arctic Cloud Experiment, **Principal Investigator**	1998
ARM Unmanned Aerospace Vehicle Kauai Experiment, **Principal Investigator**	1998
ARM Enhanced Shortwave Experiment (ARESE) II, **Principal Investigator**	2000
Puerto Rico Dust Experiment, **Principal Investigator**	2000
Southern African Regional Science Initiative -2000, **Principal Investigator**	2000
Aerosol Characterization Experiment – Asia, **Principal Investigator**	2001
The Cirrus Regional Study of Tropical Anvils and Cirrus Layers - Florida Area Cirrus Experiment, **Principal Investigator**	2002
ARM Unmanned Aerospace Vehicle Experiment, **Principal Investigator**	2002
ARM Aerosol Intensive Operating Period, **Principal Investigator**	2003
New England Air Quality Study, **Principal Investigator**	2004
DOE ARM Mixed Phase Arctic Cloud Experiment, **Principal Investigator**	2004
Intercontinental Chemical Transport Experiment, Megacity Initiative:	

Local and Global Research Observations, **Principal Investigator**	2006
Gulf of Mexico Atmospheric Composition and Climate Study, **PI**	2006
PACific Dust EXperiment (PACDEX), **Principal Investigator**	2007
Tropical Composition, Cloud and Climate Coupling (TC4) Experiment, **PI**	2007
Aerosol, Radiation, and Cloud Processes affecting Arctic Climate (ARCPAC), **PI**	2008
International Chemistry Experiment in the Arctic LOwer Troposphere(ICEALOT), **PI**	2008
Research at the Nexus of Air Quality and Climate Change (CalNex), **PI**	2010
Airborne Tropical TRopopause EXperiment (ATTREX), **PI**	2011-2013

Current Funded PI-led Projects (career total PI-led funding approximately $450M)

Project Title:	Libera
Involvement:	Principal-Investigator
Funding Agency:	NASA
Period of Performance:	4/15/20-5/6/32
Total award:	$168,472,969

Project Title:	CLARREO Pathfinder
Involvement:	Principal-Investigator
Funding Agency:	NASA LaRC
Period of Performance:	10/1/2018 - 2/10/2027
Total award:	$94,276,878

Project Title:	Total and Spectral Solar Irradiance Sensor (TSIS) Mission Operations and Data Processing
Involvement:	Deputy Principal-Investigator (former PI)
Funding Agency:	NASA
Period of Performance:	6/20/23-12/31/28
Total award:	$19,245,438

Project Title:	Total and Spectral Solar Irradiance Sensor-2 (TSIS-2)
Involvement:	Co-Investigator (former PI)
Funding Agency:	NASA GSFC
Period of Performance:	8/6/19-3/20/25
Total award:	$ 25,088,446

Project Title:	Understand the Effect of Solar Spectral Irradiance Partition between the Visible and near-IR on High-latitude Surface Climate through a Bottom-up Mechanism
Involvement:	LASP Principal Investigator
Funding Agency:	NASA Heliophysics Living With a Star
Period of Performance:	07/01/2021-06/30/2025
Total award:	$145,002

Project Title:	Atmosphere Observing System (AOS) SW Spectrometer (SWS) Study Tasks
Funding Agency:	NASA GSFC
Period of Performance:	1/27/22 - 6/30/25
Total award:	$124,836

Project Title:	International Radiation Commission (IRC) President Administrative and Travel Support
Involvement:	PI
Funding Agency:	NASA
Period of Performance:	10/1/20 - 9/30/25
Total award:	$80,000

University Courses Taught

University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 6020: Atmospheric Radiation Seminar, Fall 2024, Spring 2024, Fall 2023, Spring 2023, Fall 2022, Spring 2022, Fall 2021, Spring 2021, Fall 2020, Fall 2018, Fall 2013, Spring 2013, Fall 2012, Fall 2010, Spring 2010, Fall 2009, Spring 2009, Fall 2008, Spring 2008, Fall 2007, Fall 2005.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 4710: Atmospheric Physics; Spring 2018, Fall 2015, Spring 2014.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 6020: Seminar on Making Back of the Envelope and Order of Magnitude Estimations, Spring 2018.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 7500: Instrument Lab; Spring 2017, Spring 2011, Spring 2009, Spring 2007.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 4500: Remote Sensing; Fall 2017.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 7500: Instrument Lab; Spring 2017, Spring 2011, Spring 2009, Spring 2007.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 5235: Radiative Transfer and Remote Sensing; Spring 2025, Spring 2024, Spring 2020, Spring 2016, Spring 2006.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 1050: Weather and the Atmosphere; Spring 2015, Spring 2007.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC/ASTR 5560: Radiative Processes in Planetary Atmospheres; Fall 2022, Fall 2019, Fall 2014, Fall 2012, Spring 2010, Fall 2007, Fall 2004.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC/ASTR 5540: Mathematical Methods, Fall 2013.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 6020: Atmospheric Radiation Seminar, Fall 2018, Fall 2013, Spring 2013, Fall 2012, Fall 2010, Spring 2010, Fall 2009, Spring 2009, Fall 2008, Spring 2008, Fall 2007, Fall 2005.
University of Colorado, Department of Atmospheric and Oceanic Science, ATOC 4900-950, Independent Study, Spring 2022, Fall 2021, Summer 2009
San Jose State University, Department of Meteorology, Meteorology 163: Meteorological Instruments (lecture and lab). Spring 2003
San Jose State University, Department of Meteorology. Meteorology 10: Weather and Climate; Fall 2001, Spring 2001, Spring 2000.
Guest lecturer (one lecture/quarter), Santa Clara University, Physics Department: Introduction to Space Physics, 1996-2000

Primary Advisor to Graduate Students

Odele Coddington, ATOC Ph.D., 2005-2009
Bruce Kindel, ATOC Ph.D., 2005-2010
Patrick McBride, ATOC Ph.D., 2006-2012
Brian Hinde, AERO, M.E.,2006-2007
Yolanda Roberts ATOC Ph.D., 2008-2012
Neha Shanbhag, CS M.S., 2007-2009
Sam LeBlanc, ATOC Ph.D., 2009-2014
Andrew Kren, ATOC Ph.D., 2010-2015

Shi Song, ATOC Ph.D., 2010-2014
Timothy Reid, ATOC Ph.D., 2010-2013
Tomoko Koyama, ATOC Ph.D., 2010-2014.
Logan Wright, ATOC Ph.D, 2013-2018
Steffen Mauceri, ATOC Ph.D, 2016-2019
Julia Kent, ATOC M.S., 2016-2019
Matt Weber, ASEN M.S., 2020-2021
Mathew Van Den Heeever, ASEN Ph.D., 2020-
Matt Watwood, ATOC Ph.D., 2020-
Andrew Buggee, ATOC Ph.D., 2020-
McKenzie Hawkins, ATOC Ph.D., 2023-
Jasleen Batra, ECE, M.S., 2024-
Caleb Kumar, CS, M.S., 2024-

Advisor to Undergraduate Students

Fergus Mackenzie, 2021-2022

Advisor in the NASA Ames Astrobiology Academy:

Patrick McKenna, University of Wisconsin, 1997
Jessica Marquez, Princeton University, 1998
Michael D. Obland, University of Montana, 1999
Andrew H. Hock, Colgate University, 2000
Sam Clanton, John Hopkins University, 2001
Kelley Atkinson, Embry-Riddle Aeronautical University, 2003

Advisor to National Research Council Research Associates

Dr. Maura Rabbette, Post-Doctoral Fellow, 1997-2000
Dr. Manfred Wendisch (Institute for Tropospheric Research, Leipzig, Germany), Senior Fellow, 2003-2004

Service Activities

ATOC

2024-2025 Committees: Technology Committee (Chair), Awards Committee, Climate Physics and Mathematics Search Committee (Chair)
2023-2024 Committees: Technology Committee (Chair), Awards Committee, Toohey Tenure Review (chair), Faculty hiring strategy committee (Chair)
2022-2023 Committees: ATOC Admissions Committee (Chair SPR 2022), Awards Committee, Colloquium Committee, Weiss Tenure Review (chair), Karnauskas Tenure Review (chair)
2021-2022 Committees: ATOC Admissions Committee, Awards Committee, Weiss Tenure Review (chair)
2020-2021 Committees: ATOC Admissions Committee (Chair), Awards Committee, ATOC Exam Committee
2019-2020 Committees: Program Fees Committee (Chair); Awards Committee; ATOC Admissions Committee, ATOC Exam Committee

2018-2019 Committees: Program Fees Committee (Chair); Awards Committee (Chair); Schmidt Reappointment committee (Chair); ATOC Admissions Committee, ATOC Exam Committee
2017-2018 Committees: Program Fees Committee (Chair); Chair, ATOC Open Rank Faculty Search Committee; Awards Committee.
2016-2017 Committees: Course Fees Committee (Chair), Chair, Weis Promotion Committee; Chair, ATOC Open Rank Faculty Search Committee; Awards Committee.
2015-2016 Committees: Course Fees Committee (Chair); Awards Committee, Space Committee; ATOC Climate Dynamics Faculty Search Committee.
2014-2015 Committees: Course Fees Committee (Chair); Comps Committee, Awards Committee, Space Committee; Aerospcae Ventures Faculty Search Committee.
2013-2014 Committees: Laboratory and facilities Committee (Chair); Admissions Committee (Chair), Course Fees Committee (chair), Brian Toon Post-tenure review Committee.
2012-2013 Committees: Laboratory and facilities Committee (Chair); Admissions Committee (Chair), B. Toon tenure review committee, Fahey tenure committee.
2011-2012 Committees: Laboratory and facilities Committee (Chair); Course Fees committee
2010-2011 Committees: Laboratory and facilities Committee (Chair); Course Fees committee; PRP Committee (co-Chair)
2009-2010 Committees: Laboratory and facilities Committee (Chair); Course Fees committee; L. Avallone Promotion Committee; PRP Committee (co-Chair)
2008-2009 Committees: Laboratory and facilities Committee (Chair); ATOC Graduate Student Advisor; Course Fees committee; C. Randall Tenure & Promotion Committee
2007-2008 Committees: Laboratory and facilities Committee (Chair); Comprehensive Exam Committee (Chair); ATOC Graduate Student Advisor; Course Fees committee; L. Avallone Tenure Review Committee
2006-2007 Committees: Admissions; Laboratory and facilities Committee (Chair); C. Randall reappointment; ATOC faculty representative for CU NRC Research Doctoral Study Committee; ATOC Graduate Student Advisor; ATOC representative for CSES Director Search Committee
2005-2006 Committees: Admissions; Comprehensive Exams, Distinguished Lecturers (Chair); ATOC Graduate Student Advisor
2004-2005 Committees: Admissions; Distinguished Lecturers (Chair)

LASP

2024-2025: Internal Advisory Committee, Senior Leadership Team, Interim Associate Director of Science
2023-2024: Executive Committee, Cullens promotion committee (chair), Kahn hiring committee (chair)
2022-2023: Executive Committee, three promotion committees
2021-2022: Associate Director for Science, Earth Atmosphere; Executive Committee
2020-2021: Associate Director for Science, Earth Atmosphere; Executive Committee
2019-2020: Associate Director for Science, Earth Atmosphere; Executive Committee
2018-2019: Executive Committee, LASP Tenure Track Faculty Annual Review committee, Pink and Red Team Reviewer for LASP Discovery Proposal (HOVER).
2017-2018: Executive Committee; Chair, Eric Wolf Promotion Committee; Lars Kalnajs Promotion Committee.

2016-2017: Executive Committee; Chair, Eric Wolf Promotion Committee; Section Lead on LASP Self Study
2015-2016: Executive Committee; Faculty Evaluations Committee.
2014-2015: Executive Committee, Bruce Kindel Promotion Committee; Faculty Evaluations Committee.
2013-2014: Executive Committee, Steve Massie Hiring Committee, chair; RA Evaluations Committee; LASP EPO Advisory Committee.
2012-2013: Executive Committee, Odele Coddington Promotion Committee, LASP EPO Advisory Committee.
2011-2012: Executive Committee, Frank Eparvier Promotion Committee (chair)
2009-2010: Executive Committee; Marty Snow Promotion Committee; Frank Eparvier Promotion Committee (chair).
2008-2009: Executive Committee.
2007-2008: Executive Committee; LASP representative for space needs within College of Arts and Sciences; Michael King Hiring Committee (chair).

University of Colorado

2010: Proposal review panel, for CU Boulder's Innovative Grant Program.
2007: Proposal review panel, for CU Boulder's Innovative Grant Program.
2005-2006: Member, Boulder Faculty Assembly, Academic Affairs Committee

Science Community

Member, National Academies of Sciences Committee on Earth Sciences and Applications from Space, 2022-present
President of the IAMAS International Radiation Commission (IRC), 2020-
SCOSTEP Bureau, 2019-present
IUGG Officer, 2023-present
Scientific Organizing Committee, International Radiation Symposium (2021-2022, 2023, 2024)
Organizing Committee, 2022 Sun-Climate Symposium.
Chair, Organizing Committee, 2020 Sun-Climate Symposium.
Scientific Organizing Committee, International Radiation Symposium (2019-2022, 2023-2024)
Co-convener for two 2023 IUGG sessions and Chair of one session.
Vice President of the IAMAS International Radiation Commission (IRC), 2016-2020
Deputy Secretary General, International Association of Meteorology and Atmospheric Sciences (IAMAS), 2015-2017.
Organizing Committee, Hyperspectral Imaging and Sounding of the Environment (HISE), Optical Society of America, Sentosa Island, Singapore, 5-8 November 2018.
Convener, 2017 Joint IAPSO-IAMAS-IAGA Assembly, 27 Aug. - 1 Sep., Cape Town, South Africa., IAMAS Session Energy balance of the Earth
Chair, Organizing Committee, 2018 Sun-Climate Symposium.
Scientific Committee, 2nd International Conference on Airborne Research for the Environment (ICARE2017)
Program Chair, Hyperspectral Imaging and Sounding of the Environment (HISE), Optical Society of America, Leipzig, Germany, 14-17 November 2016.
Program Co-Chair, International Radiation Symposium 2016, The University of Auckland, New Zealand April 16-22 2016.

Member, Committee on The Effects of Solar Variability on Earth's Climate: A Workshop, Space Studies Research Board, National Research Council, 2011-2012.
Member, NASA Living With a Star Targeted Research & Technology Program Steering Committee, 2011-2016.
Member of the International Radiation Commission (IRC), 2009-present; Secretary, 2012-2016; Vice-President, 2016-present.
Member of science definition team for the NASA Climate Absolute Radiance and Refractivity Observatory (CLARREO) Decadal Survey Mission, 2007-2018.
Member of science definition team for the NASA Aerosol, Clouds and Ecosystem (ACE) Decadal Survey Mission, 2007-2010.
Member of the European Fleet for Airborne Research (EUFAR), 2006-present.
Invited participant, NASA workshop to assess the potential of Earth climate science with data from the Deep Space Observatory (DSCOVR; formerly Triana) satellite, May 2007.
Invited participant, National Research Council Workshop on Recovery of Climate Capabilities on NPOESS, Options to Ensure the Climate Record, June 2007.
Invited participant and co-Chair of Solar Breakout discussion, NASA CLARREO workshop, July 2007.
2005-2006: Member, National Research Council Space Studies Board (SSB), Committee on Large Optical Systems in Space.
2005-2006: Member, Steering Committee, Achieving Satellite Instrument Calibration for Climate Change, ASIC^3