

VITA
JEFFREY THEODORE KIEHL

DATE AND PLACE OF BIRTH: 10 June 1952
Harrisburg, Pennsylvania

EDUCATION:

B.S.	1974	Elizabethtown College, Elizabethtown, PA (Physics)
M.S.	1977	Indiana University, Bloomington (Physics)
	1979	Purdue University, West Lafayette, Ind. (Atmospheric Science)
Ph.D	1981	State University of New York, Albany (Atmospheric Science)
M.A.	2003	Regis University, Denver, CO (Psychology)
Dipl.	2009	Inter-Regional Society of Jungian Analysts

RESEARCH POSITIONS:

1975 – 1977	Research Assistant, High Energy Theoretical Physics Group, Indiana University.
1977 – 1978	Research Assistant, Atmospheric Sciences Dept., Purdue University. Research conducted while on leave to Harvard University.
1979 – 1981	Research Assistant, Atmospheric Sciences Dept., SUNY Albany. Research conducted while on leave to Massachusetts Institute of Technology.
1981 – 1982	Visiting Scientist, NCAR, Atmospheric Analysis and Prediction Division and Atmospheric Chemistry and Aeronomy Division, Boulder, Colorado.
1982 – 1984	Post Doctoral Fellow, Advanced Studies Program, NCAR, Boulder, Colorado.
1984 – 1986	Scientist I, Cloud-Climate Interaction Group, National Center for Atmospheric Research, Boulder, Colorado.
1986 – 1987	Scientist II, Cloud-Climate Interaction Group, National Center for Atmospheric Research, Boulder, Colorado.
1987 – 1989	Scientist II, Climate Modeling Section, National Center for Atmospheric Research, Boulder, Colorado.
1990 – 1991	Visiting Scholar, Department of Applied Mathematics and Theoretical Physics, Cambridge University, Cambridge, England (on leave from NCAR).
1989 – 1993	Scientist III, Climate Modeling Section, National Center for Atmospheric Research, Boulder, Colorado.
1995 – 1999	Head, Climate Modeling Section, National Center for Atmospheric Research, Boulder, Colorado.

1993 – 2001	Senior Scientist, Climate Modeling Section, National Center for Atmospheric Research, Boulder, Colorado.
2001 – 2003	Chairman of the Community Climate Model Scientific Steering Committee
2003 – 2018	Senior Scientist, Climate Change Research Section, National Center for Atmospheric Research, Boulder, Colorado.
2010 – 2015	Section Head, Climate Change Research Section, National Center for Atmospheric Research, Boulder, Colorado.
2013 – 2014	ASP Faculty Fellowship Leave to Earth & Planetary Science Department UC Santa Cruz.
2015 – Present	Adjunct Professor, Department of Earth & Planetary Sciences, University of California, Santa Cruz, CA

TEACHING EXPERIENCE:

1973 – 1974	Teaching Assistant, Physics, Elizabethtown College.
1974 – 1975	Teaching Assistant, Physics, Indiana University
1978	Teaching Assistant, Atmospheric Sciences, Purdue University
1986	Instructor for AMS Atmospheric Radiation Summer Course, Boulder, Colorado.
1986	Taught Radiative Processes in Planetary Atmospheres (APAS556) at University of Colorado, Boulder
1995	Taught Summer Course in Atmosphere-Ocean Modeling at Scripps Institution of Oceanography, University of California, San Diego.
2017	Taught Summer Course in Psychology of Climate Change, University of California, Santa Cruz.

PROFESSIONAL SOCIETIES and COMMITTEES:

American Meteorological Society
 American Geophysical Union
 American Counseling Association

International Association for Analytical Psychology

AWARDS and HONORS:

Educate for Service Through Professional Achievement Award
Elizabethtown College Alumni Association
Nominated for Outstanding Publication Award, NCAR (1986)
Nominated for Outstanding Publication Award, NCAR (1987)
Nominated for Outstanding Publication Award, NCAR (1988)
Nominated for Outstanding Publication Award, NCAR (1996)
CCSM Distinguished Achievement Award, 2003
NASA H.J.E. Reid Award, 2003
NCAR Outstanding Publication Award, 2006
Shared as member of IPCC in Nobel Peace Prize, 2007
Fellow of the American Geophysical Union
Fellow of the American Meteorological Society
AGU Climate Communication Prize, 2012

PRINCIPAL PUBLICATIONS OF

Jeffrey T. Kiehl

Books:

Kiehl, J.T. and V. Ramanathan (eds.), 2006: *Frontiers in Climate Modeling*. Cambridge University Press.

Kiehl, J.T., 2016: *Facing Climate Change: An Integrated Path to the Future*. Columbia University Press.

Refereed:

1. Kiehl, J.T., 1976: Comment on Rb-He bound and quasibound states. *Phys. Lett. A*, **56**, 82.
2. Kiehl, J.T., D.B. Lichtenberg and J.G. Wills, 1977: Quark model calculation of mass spectrum of charmed mesons. *Lett Nuov. C.*, **18**, 283-286.
3. Wills, J.G., D.B. Lichtenberg and J.T. Kiehl, 1977: Meson spectrum in quark model with a phenomenological potential. *Phys. Rev. D*, **15**, 3358-3365.
4. Lichtenberg, D.B., J.G. Wills and J.T. Kiehl, 1977: Interpretation of upsilon (9.5) as evidence for another quark. *Phys. Rev. L*, **39**, 1592-1594.
5. Chylek, P., J.T. Kiehl and M.K.W. Ko, 1978: Narrow resonance structure in Mie scattering characteristics. *Appl. Optics*, **17**, 3019-3021.
6. Chylek, P., J.T. Kiehl and M.K.W. Ko, 1978: Fine structure of Mie scattering. *J. Coll. I. Sci.*, **64**, 595-597.

7. Chylek, P., J.T. Kiehl and M.K.W. Ko, 1978: Optical levitation and partial wave resonances. *Phys. Res. A*, **18**, 2229-2233.
8. Chylek, P., J.T. Kiehl and M.K.W. Ko, 1979: Infrared extinction and the mass concentration of atmospheric aerosol. *Atmos. Envir.*, **13**, 169-173.
9. Chylek, P., J.T. Kiehl and A. Mugnai, 1979: Light scattering by a pair of conjugate nonspherical particles. *J. Opt. Soc. A*, **69**, 1550-1553.
10. Kiehl, J.T., M.K.W. Ko, A. Mugnai and P. Chylek, 1980: Perturbation approach to light scattering by non-spherical particles. Light Scattering by Irregularly Shaped Particles. Ed. D. Schuerman, Plenum Press. N.Y., 334 pp.
11. Chylek, P., J.T. Kiehl, M.K.W. Ko and A. Ashkin, 1980: Surface waves in light scattering by spherical and non-spherical particles. Light Scattering by Irregularly Shaped Particles. Ed. D. Schuerman, Plenum Press, N.Y., 334 pp.
12. Chylek, P., and J.T. Kiehl, 1981: Sensitivities of radiative-convective climate models. *J. Atmos. Sci.*, **38**, 1105-1110.
13. Kiehl, J.T., and V. Ramanathan, 1982: Radiative heating due to increased CO₂: The role of H₂O continuum absorption in the 12-18 μ region. *J. Atmos. Sci.*, **39**, 2923-2926.
14. Kiehl, J.T., and V. Ramanathan, 1983: CO₂ radiative parameterization used in climate models: Comparison with narrow band models and with laboratory data. *J. Geophys. Res.*, **88**, 5191-5202.
15. Kiehl, J.T., 1983: Satellite detection of effects due to increased atmospheric carbon dioxide. *Science*, **222**, 504-506.
16. Kiehl, J.T., and T. Yamanouchi, 1984: A parameterization for solar absorption due to oxygen. *Tellus*, **37**, 1-6.
17. Kiehl, J.T., 1985: Searching for the radiative signal of increasing CO₂ (and other trace gases). *Detecting the Climatic Effects of Increasing Carbon Dioxide*, M.C. MacCracken and F.M. Luther, eds., DOE/ER-0235, 13-28.
18. Kiehl, J.T., Chr. Brühl and T. Yamanouchi, 1985: A parameterization for the absorption due to the near infrared bands of CO₂. *Tellus*, **37B**, 189-196.
19. Ramanathan, V., H.B. Singh, R.J. Cicerone and J.T. Kiehl, 1985: Trace gas trends and their potential role in climatic change. *J. Geophys. Res.*, **90**, 5547-5566.
20. Ramaswamy, V., and J.T. Kiehl, 1985: Sensitivities of the radiative forcing due to large loadings of smoke and dust aerosols. *J. Geophys. Res.*, **90**, 5597-5613.
21. Kiehl, J.T., and S. Solomon, 1986: On the radiative balance of the stratosphere. *J. Atmos. Sci.*, **43**, 1525-1534.

22. Solomon, S., J.T. Kiehl and R. Garcia, 1986: Transport of long-lived tracers in an observationally based two-dimensional model. *J. Atmos. Sci.*, **43**, 1603-1617.
23. Solomon, S., J.T. Kiehl, B.J. Kerridge, E.E. Remsberg and J.M. Russell III, 1986: Evidence for non-local thermodynamic equilibrium in the v_3 mode of mesospheric ozone. *J. Geophys. Res.*, **91**, 9865-9876.
24. Kiehl, J.T., 1986: Changes in the radiative balance of the atmosphere due to increases in CO₂ and trace gases. *Adv. Space Res.*, **6**, 55-60.
25. Kiehl, J.T., and R.E. Dickinson, 1987: A study of the radiative effect of enhanced atmospheric CO₂ and CH₄ on early earth surface temperatures. *J. Geophys. Res.*, **92**, 2991-2998.
26. Potter, G.L., J.T. Kiehl and R.D. Cess, 1987: A clarification on certain issues related to the CO₂-climate problem, *Clim. Change*, **10**, 87-95.
27. Kiehl, J.T., B.A. Boville and B.P. Briegleb, 1988: Response of a general circulation model to a prescribed Antarctic ozone hole. *Nature*, **332**, 501-504.
28. Kiehl, J.T., and B.A. Boville, 1988: The radiative-dynamical response of a stratospheric-tropospheric general circulation model to changes in ozone. *J. Atmos. Sci.*, **45**, 1798-1817.
29. Cess, R.D., G.L. Potter, J.P. Blanchet, G.J. Boer, S.J. Ghan, J.T. Kiehl, H. Le Treut, Z.-X. Li, X.-Z. Liang, J.F.B. Mitchell, J.-J. Morcrette, D.A. Randall, M.R. Riches, E. Roeckner, U. Schlese, A. Slingo, K.E. Taylor, W.M. Washington, R.T. Wetherald and I. Yagai, 1989: Interpretation of cloud-climate feedback as produced by 14 atmospheric general circulation models. *Science*, **245**, 513-516.
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31. Cess, R. D., G. L. Potter, J. P. Blanchet, G. J. Boer, M. Déqué, W. L. Gates, S. J. Ghan, J. T. Kiehl, H. Le Treut, Z.-X. Li, X.-Z. Liang, B. J. McAvaney, V. P. Meleshko, J. F. B. Mitchell, J.-J. Morcrette, D. A. Randall, L. Rikus, E. Roeckner, J. F. Royer, U. Schlese, D. A. Sheinin, A. Slingo, A. P. Sokolov, K. E. Taylor, W. M. Washington, R. T. Wetherald and I. Yagai, 1990: Intercomparison and interpretation of climate feedback processes in seventeen atmospheric general circulation models. *J. Geophys. Res.*, **95**, 16601-16615.
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59. Grabowski, W.W., M.W. Moncrieff, and J.T. Kiehl, 1996: Long term behavior of precipitating tropical cloud systems: A numerical study. *Quart. J. Roy. Meteor. Soc.*, **122**, 1019-1042.

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61. Cess, R.D., M.H. Zhang, G.L. Potter, V. Alekseev, H.W. Barker, S. Bony, R.A. Colman, D.A. Dazlich, A.D. Del Genio, M. Déqué, M.R. Dix, V. Dymnikov, M. Esch, L.D. Fowler, J.E. Fraser, V. Galin, W.L. Gates, J.J. Hack, W.L. Ingram, J.T. Kiehl, Y. Kim, H. Le Treut, X.-Z. Liang, B.J. McAvaney, V.P. Meleshko, J.J. Morcrette, D.A. Randall, E. Roeckner, M.E. Schlesinger, P.V. Sporyshev, K.E. Taylor, B. Timbal, E.M. Volodin, W. Wang, W.C. Wang and R.T. Wetherald, 1997: Comparison of the seasonal change in cloud-radiative forcing from atmospheric general circulation models and satellite observations. *J. Geophys. Res.*, **102**, 16593-16603.
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