Curriculum Vitae

Yefim L. Kogan

Education

M.S. in Theoretical Physics, Moscow University, Moscow, USSR, 1970.

Ph.D. in Atmospheric Science, Central Aerological Observatory, Moscow, USSR, 1980.

Professional experience

2016-Present, Senior Research Scientist, NorthWest Research Associates,

1997-2015, Research Professor, School of Meteorology, University of Oklahoma

1996-2015, Senior Research Scientist, Cooperative Institute for Mesoscale Meteorological Studies, University of Oklahoma

1992-Present, Adjunct Associate Professor, Adjunct Professor (since 1996), School of Meteorology, University of Oklahoma

1988-1996, Research Scientist, Cooperative Institute for Mesoscale Meteorological Studies, University of Oklahoma

1975-1981, Head, Numerical Modeling Group, Department of Atmospheric Dynamics and Cloud Physics, Central Aerological Observatory, Moscow

1973-1975, Research Scientist, Department of Radar Meteorology, Central Aerological Observatory, Moscow

Professional Activities

Science Team Member, ASTEX (Atlantic Stratus Transition Experiment), ACE (Aerosol Characterization Experiment), MAST (Monterey Area Ship Track) Experiment, FIRE III Project

Member of NOAA and NASA Aerosol/Climate Research Panels

Invited Speaker**,** NASA/Goddard Space Flight Center and Department of Meteorology at the University of Maryland Joint Summer Seminar Series, August 14-20, 1988.

Session Chair, 1998 and 2000 Conferences on Clouds and Precipitation

Reviewer of papers to Journal of the Atmospheric Sciences, Monthly Weather Review, Journal of Applied Meteorology, Atmospheric Research, Atmospheric Environment; proposals to NSF, NASA, NOAA, DOE, US-Israel Binational Science Foundation.

Served on the OU Geosciences Computing Network Advisory Committee, Weather Center Computer Resource Committee

Publications:

Most notable publications over the last decade:

Kogan, Y. L., 2022: Estimating Phase Transition Rates in Shallow Cumulus Clouds from Mass Flux. Part I: Theory and Numerical Simulations. *Journal of the Atmospheric Science.* 79, 2983-2999, https://doi.org/10.1175/JAS-D-22-0060.1

Kogan, Y. L., 2022: Condensation–mass flux connection in warm convective clouds: theory and implications for cloud supersaturation, *Adv. Sci. Res*., 19, 91–95, https://doi.org/10.5194/asr-19-91-2022

Kogan, Y. L.: LES study of precipitation/condensation dependence on cumulus clouds dynamics, Adv. Sci. Res., 18, 89–92, https://doi.org/10.5194/asr-18-89-2021, 2021.

Kogan, Y. L. and M. Ovchinnikov, 2020: Formulation of autoconversion and drop spectra shape in shallow cumulus clouds *Journal of the Atmospheric Science.***77**, 711-722

McMichael L. A., D. B. Mechem, S. Wang, QingWang, Y. L. Kogan, J. Teixiera , 2019: Assessing the mechanisms governing the daytime evolution of marine stratocumulus using large-eddy simulation. *Quarterly journal of the Royal Meteorological Society*, Vol.145(719), p.845-866. https://doi.org/10.1002/qj.3469

Kogan, Y. L., 2018: Using a Variability Factor to Account for Cloud Microphysical Inhomogeneity in Mesoscale Models, . *J. Atmos. Sci*., 75, 2549–2561

Kogan, Y. L., 2017: LES study of microphysical variability bias in shallow cumulus. *Advances in Science and Research,* 14, 103-107, doi:10.5194/asr-14-103-2017

Kogan, Y. L., D. B. Mechem, 2016: A PDF-Based Formulation of Microphysical Variability in Cumulus Congestus Clouds. *J. Atmos. Sci*., 73, 167-184.

Nelson, K. J., D. B. Mechem and Y. L. Kogan, 2016: Evaluation of warm-rain microphysical parameterizations in mesoscale simulations of the cloudy marine boundary layer. *Mon. Wea. Rev*., 2137–2154

Kogan, Y. L., D. B. Mechem, 2014: A PDF based microphysics parameterization for shallow cumulus clouds. *J. Atmos. Sci.*, **71**, 1070-1089.

Kogan Y. L., 2013: A Cumulus Cloud Microphysics Parameterization for Cloud-Resolving Models. *J. Atmos. Sci.,* **70**, 1423-1436.

Kogan, Y.L. and A. Belochitski, 2012: Parameterization of Cloud Microphysics Based on Full Integral Moments, *J. Atmos. Sci.*, **69**, 2229-2242.

Kogan, Y. L., D. B. Mechem and K. Choi, 2012: Effects of Sea-Salt Aerosols on Precipitation in Simulations of Shallow Cumulus, *J. Atmos. Sci.* **69**, 463-483.

van Zanten, M. C., B. B. Stevens, L. Nuijens, A. P. Siebesma, A. Ackerman, F. Burnet, A. Cheng, F. Couvreux, H. Jiang, M. Khairoutdinov, Y. Kogan, D. C. Lewellen, D. Mechem, K. Nakamura, A. Noda, B. J. Shipway, J. Slawinska, S. Wang and A. Wyszogrodzki, 2011: Controls on precipitation and cloudiness in simulations of trade-wind cumulus as observed during RICO. *J. Adv. Model. Earth Syst*., 3, M04001, doi:10.1029/2011MS000056.

Mechem, D. B., Y. L. Kogan, D. Shultz, 2010: Large Eddy Observation of Post-frontal Continental Stratus. *J. Atmos. Sci.* **67**, 3368-3383.

Mechem, D. B., Y. L. Kogan, D. Shultz, 2010: Large Eddy Simulations of Post-frontal Continental Stratus. *J. Atmos. Sci*. **67**, 3368-3383.

Kogan, Y.L., Z. N. Kogan, and D. B. Mechem, 2009: Fidelity of Analytic Drop Size Distributions in Drizzling Stratiform Clouds Based on Large-Eddy Simulations, *J. Atmos. Sci*, **66**, 2335–2348.