Ilan Koren – CV **Jan 2018**

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Education

2002 - 2005 Postdoctoral fellowship, NASA - Goddard Space Flight Center, Climate and Radiation Branch

1998 - 2002 Ph.D., Tel-Aviv University, Geophysics and Planetary Sciences. Atmospheric Physics

Current and Previous Positions

2017 - Present Professor, Department of Earth and Planetary Sciences, Weizmann Institute of Science

2011 – 2016 Associate Professor, Department of Earth and Planetary Sciences, Weizmann Institute of Science

2009 Short Sabbatical in NOAA Boulder, Colorado. Fellowship from the Cooperative Institute for Research in Environmental Sciences (CIRES)

2005 - 2011 Senior Scientist, Department of Earth and Planetary Sciences, Weizmann Institute of Science

Selected Awards and Recognitions

2016 Milestone article – Koren et al 2006, was selected to be one of the 10 papers that were Environment Research Letters - ERL's most significant breakthrough articles from the last 10 years

2009 Krill Prize for outstanding young researchers of the Wolf Foundation

2008 International Radiation Commission – Young Scientist Award: given to a future-promising scientist who made an important contribution

Selected list of Memberships in Committees and Boards

2017 - Present World Meteorological Organization (WMO), a member on expert team on weather modification

2017 - Present Member of the executive committee of the Surface Ocean - Lower Atmosphere Study (SOLAS) project

2013 - Present Member of the Scientific Steering Committee of the International Surface Ocean - Lower Atmosphere Study (SOLAS) project

2012 - Present Member of the Commission of the International Commission on Clouds and Precipitation (ICCP)

2015 – Present Board of Directors of the Interuniversity Institute for Marine Sciences in Eilat, Israel (IUI)

Selected publications (since 2010)

- Lehahn Y, Koren I, Sharoni S, d'Ovidio F, Vardi A & Boss E: Dispersion/dilution enhances phytoplankton blooms in low-nutrient waters, *Nat. Commun. 8, 14868 doi: 10.1038/ncomms14868, 2017*

- Altaratz O, Kucienska B, Kostinski A, Raga G.B and Koren I: Global association of aerosol with flash density of intense lightning, *Environ. Res. Lett. 12 114037, 2017*
- Chen Q, Koren I, Altaratz O, Heiblum R H, Dagan G, and Pinto L: How do changes in warm-phase microphysics affect deep convective clouds?, *Atmos. Chem. Phys., 17, 9585-9598, doi: 10.5194/acp-17-9585-2017, 2017*
- Dagan G, Koren I, Altaratz O, and Heiblum R H: Time-dependent, non-monotonic response of warm convective cloud fields to changes in aerosol loading, *Atmos. Chem. Phys., 17, 7435-7444, doi: 10.5194/acp-17-7435-2017, 2017*
- Sarangi C, Tripathi S N, Kanawade V P, Koren I, and Pai D S: Investigation of the aerosol–cloud–rainfall association over the Indian summer monsoon region, *Atmos. Chem. Phys., 17, 5185-5204, doi: 10.5194/acp-17-5185-2017, 2017*
- Koren I, Tziperman E and Feingold G: Exploring the Nonlinear Cloud and Rain Equation, *Chaos 27, 013107, doi: 10.1063/1.4973593, 2017*
- Hirsch E, Koren I, Altaratz O, Levin Z and Agassi E: Enhanced humidity pockets originating in the mid boundary layer as a mechanism of cloud formation below the lifting condensation level, *Environ. Res. Lett. doi:10.1088/1748-9326/aa5ba4 2017*
- Heiblum RH, Koren I, Altaratz O, and Kostinski A B: The Consistent Behavior of Tropical Rain: Average Reflectivity Vertical Profiles Determined by Rain Top Height, *J. Hydrometeor., 18, 591–609, doi: 10.1175/JHM-D-16-0078.1 2017*
- Dagan G, Koren I, Altaratz O, and Heiblum RH: Aerosol effect on the evolution of the thermodynamic properties of warm convective cloud fields, *Sci. Rep. 6, 38769; doi: 10.1038/srep38769 2016*
- Gufan A, Lehahn Y, Fredj E, Price C, Kurchin R & Koren I: Segmentation and Tracking of Marine Cellular Clouds observed by Geostationary Satellites, *International Journal of Remote Sensing, 37:5, 1055-1068, 2016*
- Heiblum RH, Altaratz O, Koren I, Feingold G, Kostinski AB, Khain AP, Ovchinnikov M, Fredj E, Dagan G, Pinto L, Yaish R, Chen Q: Characterization of cumulus cloud fields using trajectories in the center-of-gravity vs. water mass phase space. Part I: Cloud tracking and phase space description, *J. Geophys. Res. Atmos., 121, 6336–6355, doi:10.1002/2015JD024186, 2016*
- Heiblum RH, Altaratz O, Koren I, Feingold G, Kostinski AB, Khain AP, Ovchinnikov M, Fredj E, Dagan G, Pinto L, Yaish R, Chen Q: Characterization of cumulus cloud fields using trajectories in the center-of-gravity vs. water mass phase space. Part II: Aerosol effects on warm convective clouds, J. *Geophys. Res. Atmos., 121, 6356–6373, doi:10.1002/2015JD024193, 2016*
- Mishra, A. K., Y. Rudich, and I. Koren: Spatial boundaries of Aerosol Robotic Network observations over the Mediterranean basin, *Geophys. Res. Lett., 43, 2259–2266, doi:10.1002/ 2015GL067630, 2016*
- Tubul Y, Koren I, and Altaratz O: The tropical Atlantic surface wind divergence belt and its effect on clouds, *Earth Syst. Dynam., 6, 781-788, doi:10.5194/esd-6-781-2015, 2015*
- Ben Ami, Y., Altaratz, O., Yair, Y., and Koren, I: Lightning characteristics over the eastern coast of the Mediterranean during different synoptic systems, *Nat. Hazards Earth Syst. Sci., 15, 2449-2459, doi:10.5194/nhess-15-2449-2015, 2015*
- Mishra AK, Koren I, Rudich Y: Effect of aerosol vertical distribution on aerosol-radiation interaction: A theoretical prospect, *Heliyon, e00036, 2015*
- Koren I, Altaratz O and Dagan G: Aerosol effect on the mobility of cloud droplets, *Environ. Res. Lett. 10 104011, 2015*
- Dagan, G., Koren, I., and Altaratz, O: Aerosol effects on the timing of warm rain processes, *Geophys. Res. Lett., 42, doi:10.1002/2015GL063839, 2015*
- Sharoni S., M. Trainic, D. Schatz, Y. Lehahn, J.M. Flores, K. D. Bidle, S. Ben-Dor, Y. Rudich, I. Koren, A.Vardi, Infection of phytoplankton by aerosolized marine viruses, *Published online before print May 11, 2015, doi: 10.1073/pnas.1423667112 PNAS May 11, 2015*
- Dagan G, Koren I, and Altaratz O: Competition between core and periphery-based processes in warm convective clouds – from invigoration to suppression, *Atmos. Chem. Phys., 15, 2749-2760, doi:10.5194/acp-15-2749-2015, 2015*
- Feingold G, Koren I, Yamaguchi T and Kazil J: On the reversibility of transitions between closed and open cellular convection, *Atmos. Chem. Phys., 15, 7351-7367, doi:10.5194/acp-15-7351-2015, 2015*

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- Mishra A K, Lehahn Y, Rudich Y, and Koren I: Co-variability of smoke and fire in the Amazon Basin, *Atmospheric Environment, Vol. 109, May 2015, Pages 97-104, doi:10.1016/j.atmosenv.2015.03.007, 2015*
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- Koren, I., G. Dagan, and O. Altaratz: From aerosol-limited to invigoration of warm convective clouds, *Science, 344(6188), 1143-1146, 2014*
- Altaratz, O., I. Koren, L. A. Remer, and E. Hirsch: Review: Cloud invigoration by aerosols—Coupling between microphysics and dynamics, *Atmospheric Research, 140–141(0), 38-60, 2014*
- Wollner U., Koren I., Altaratz O. and Remer A.L.: On the signature of the cirrus twilight zone, *Environmental Research Letters 9, 094010, 2014*
- Lehahn, Y., Koren, I., Schatz, D., Frada, M., Sheyn, U., Boss, E., Efrati, S., Rudich, Y., Trainic, M., Sharoni, S., Laber, C., DiTullio, Giacomo R., Coolen, Marco J.L., Martins, Ana M., Van Mooy, Benjamin A.S., Bidle, Kay D., Vardi, A., Decoupling Physical from Biological Processes to Assess the Impact of Viruses on a Mesoscale Algal Bloom, *Current Biology, doi:10.1016/j.cub2014.07.046, 2014*
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- Lehahn, Y., I. Koren, Y. Rudich, K. D. Bidle, M. Trainic, J. M. Flores, S. Sharoni, and A. Vardi: Decoupling atmospheric and oceanic factors affecting aerosol loading over a cluster of mesoscale North Atlantic eddies, *Geophys. Res. Lett., 41, doi:10.1002/2014GL059738, 2014*
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- Frada, Miguel J., Schatz, D., Farstey, V., Ossolinski, Justin E., Sabanay, H., Ben-Dor, S., Koren, I., Vardi, A., Zooplankton May Serve as Transmission Vectors for Viruses Infecting Algal Blooms in the Ocean, *Current Biology 24, 2592-2597 2014*
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- Feingold, G. and Koren, I.: A model of coupled oscillators applied to the aerosol cloud–precipitation system, *Nonlin. Processes Geophys., 20, 1011-1021, doi:10.5194/npg-20-1011-2013, 2013*
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