

Brief CV of Konstantinos Kourtidis
Prof. of Atmospheric Physics and Technology

Studies: B. Sc. in Physics, Aristotle University of Thessaloniki (1987), Ph.D. in Physics, Aristotle University of Thessaloniki (1991). The Ph.D. work was carried out at the Max-Planck-Institute for Aeronomy, Katlenburg-Lindau (now Max-Planck-Institute for Solar System Research, Goettingen), Germany.

Research interests: Atmospheric sciences. Air pollution, pollution – radiation – climate interactions, atmospheric electricity.

Teaching the undergraduate courses: Atmospheric Physics (1st sem.), Special issues in air pollution (4th sem.), Climatology (7th sem.), Global biogeochemistry (8th sem.), Applied remote sensing (7th sem.).

Contact details

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Professional experience (selection)

1. Doctoral Fellowship at the Max Planck Institute for Aeronomy, Katlenburg-Lindau, Germany (10.1987-11.1991); research Fellowship at the Max Planck Institute for Aeronomy, Katlenburg-Lindau, Germany (12.1991-12.1993); research Fellowship of the Max-Planck-Gesellschaft at the Max Planck Institute for Aeronomy, Katlenburg-Lindau, Germany (5.1995-7.1995); NASA/JPL scholarship, Summer School of Earth Sciences: Processes of Global Change, Pasadena, CA, USA (15-19.8.1993); visiting Research Fellowship at Goddard Space Flight Center, NASA, Greenbelt, USA (June 2000); visiting Research Fellowship at Institute of Geophysics, University of Oslo, Norway (January 2001).
2. Head of National Delegation in PBEO (Programme Board for Earth Observation) 2004-2010 and DOSTAG (Data Operations Scientific and Technical Advisory Group) 2004-2012 of the European Space Agency (ESA); member of the GSRT Working Group for the realization and monitoring of the accession of Greece in ESA 2004-2012. National Representative of Greece in EU's COST ESSEM (Cooperation in Science and Technology Earth System Science and Environmental Management) Domain Committee 2010-2013.
3. Managing Editor of the on-line Newsletter of the European Geosciences Union (EGU) (<http://www.egu.eu/newsletter/> , 2002-2011); managing administrator of the geoscientific images database of EGU (<http://imaggero.egu.eu> , 2007-2013). Member of the Education, Outreach, News and Sponsorship Committee of EGU (2006-2013); Member of the Education Committee of EGU

(2017-today); member in several professional organizations, referee at several scientific journals; Reviewer, UNEP EEAP Report on Environmental Effects of Ozone Depletion and Interactions with Climate Change, 2006 and 2010.

4. Participation in 45+ national and international research programmes; PI in several of these; 80+ publications in journals included in ISI, 9 contributions in monographs, 100+ publications in international conference proceedings; 1700+ citations in Scopus, h-index 28.

Awards

European Geosciences Union Service Award 2007 (citation: “in recognition of his generous and innovative services as Managing Editor of the EGU Newsletter”, see <https://www.egu.eu/awards-medals/union-service-award/2007/kostas-kourtidis/>).

Published work

Books

1 published book (K. Kourtidis, Global Biogeochemical cycles: Recycling in the global natural geosystem, Tziolas Publications, Thessaloniki, 2024, 296 pages (in Greek), ISBN: 978-618-221-073-4 (<https://www.tziola.gr/book/viogeoximikoi-kykloi-2e/>).

Ph.D. Thesis

Kourtidis K. A. (1991) Photochemical air pollution in urban and rural areas, 125 p., Aristotle University of Thessaloniki.

ISI-Indexed journals

1. Enders, G., R. Dlugi, R. Steinbrecher, B. Clement, R. Daiber, J. V. Eijk, S. Gab, M. Haziza, G. Helas, U. Herrmann, M. Kessel, J. Kesselmeier, D. Kotzias, **K. Kourtidis**, H.--H. Kurth, R. T. McMillen, G. Roider, W. Schuermann, U. Teichmann and L. Torres, Biosphere/Atmosphere interactions: Integrated research in a european coniferous forest ecosystem. *Atmospheric Environment* 26A, 171-189, 1992.
2. Rappenglueck B., **K. Kourtidis** and P. Fabian, Measurements of ozone and peroxyacetyl nitrate (PAN) in Munich. *Atmospheric Environment* 27B, 293-305, 1993.
3. **Kourtidis K. A.**, P. Fabian, C. Zerefos and B. Rappenglueck, Peroxyacetyl nitrate (PAN), peroxypropionyl nitrate (PPN) and PAN/ozone ratio measurements at three sites in Germany. *Tellus* 45B, 442-457, 1993.
4. Fabian P., R. Borchers and **K. Kourtidis**, Bromine-containing source gases during EASOE. *Geophys. Res. Lett.* 21, 13, 1219-1222, 1994.
5. **Kourtidis K. A.**, R. Borchers, P. Fabian and J. Harnisch, Carbonyl sulfide (COS) measurements in the Arctic Polar Vortex. *Geophys. Res. Lett.* 22, 393-396, 1995.

- 6.** Harnisch, J., R. Borchers, P. Fabian and **K. Kourtidis**, Aluminium production as a source of Carbonyl Sulfide (COS). *Environ. Sci. and Pollut. Res.* 2 (3), 161-162, 1995.
- 7.** **Kourtidis K.**, R. Borchers and P. Fabian, Dibromomethane (CH₂Br₂) measurements in the upper troposphere and the lower stratosphere. *Geophys. Res. Lett.* 23, 2581-2583, 1996.
- 8.** **Kourtidis K.A.**, R. Borchers and P. Fabian, Some Methyl Nitrate observations at an urban and a rural site in Germany, *Fresenius Environmental Bulletin* 6, 611-616, 1997.
- 9.** Vassiliadis D. V., **K. A. Kourtidis** and O. Poulida, The Potential of Statistical State Space Models in Urban Ozone Forecasting, *Environ. Sci. and Pollut. Res.* 5, 7-11, 1997.
- 10.** **Kourtidis K.A.**, R. Borchers and P. Fabian, Vertical distribution of methyl bromide (CH₃Br) in the stratosphere, *Geophys. Res. Lett.* 25, 505-508, 1998.
- 11.** **Kourtidis K.A.**, I. C. Ziomas, B. Rappenglueck, A. Proyou and D. Balis, Evaporative traffic hydrocarbon emissions, traffic CO and speciated HC emissions from the city of Athens, *Atmospheric Environment* 33, 3831-3842, 1999.
- 12.** **Kourtidis K.** and I. Ziomas, Estimation of secondary organic aerosol (SOA) production from traffic from the city of Athens, *Global NEST* 1, 33-38, 1999.
- 13.** Simeonidis P., G. Sanida, I. Ziomas and **K. Kourtidis**, An estimation of the spatial and temporal distribution of biogenic hydrocarbon emissions in Greece, *Atmospheric Environment* 33, 3791-3801, 1999.
- 14.** Rappenglueck B., **K. Kourtidis**, D. Melas and P. Fabian, Observations of biogenic and anthropogenic NMHC in Athens Area during the PAUR campaign, *Phys. Chem. Earth (B)*, 24, 717-724, 1999.
- 15.** **Kourtidis K.**, I. Ziomas, C. Zerefos, A. Gousopoulos, D. Balis and P. Tzoumaka, Benzene and toluene levels measured with a commercial DOAS system in Thessaloniki, Greece. *Atmospheric Environment*, 34, 1471-1480, 2000.
- 16.** Zerefos C., K. Ganey, **K. Kourtidis**, M. Tzortziou, A. Vasaras and E. Syrakov, On the origin of SO₂ above Northern Greece, *Geophys. Res. Lett.*, 27, 365-368, 2000.
- 17.** Jonson J.E., A. Kylling, T. Berntsen, I.S.A. Isaksen, C.S. Zerefos and **K. Kourtidis**, Chemical effects of UV fluctuations inferred from total ozone and tropospheric aerosol variations, *J. Geophys. Res.* 105, 14,561-14,574, 2000.
- 18.** Zerefos, C., D.S. Balis, C. Meleti, A.F. Bais, K. Tourpali, **K. Kourtidis**, K. Vanicek, F. Capelani, U. Kaminski, T. Colombo, R. Stubi, L. Manea, P. Formenti, M.O.

Andreae, Changes in Surface Solar UV irradiances and Total Ozone during the Solar Eclipse of August 11, 1999, *J. Geophys. Res.*, 105, 26,463-26,473, 2000.

19. Zerefos C.S., D. S. Balis, P. Zanis, C. Meleti, A.F. Bais, K. Tourpali, D. Melas, I. Ziomas, E. Galani, **K. Kourtidis**, A. Papayannis and Z. Gogosheva, Changes in surface UV solar irradiance and ozone over the Balkans during the eclipse of August 11, 1999, *Adv. Space Res.*, 27, 1955-1963, 2001.

20. Zerefos C. S., **K. A. Kourtidis**, D. Balis, A. Bais and B. Calpini, Photochemical activity over the Eastern Mediterranean under variable environmental conditions, *Phys. Chem. Earth (C)*, 26, 549-554, 2001.

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22. Kouvarakis G., M. Vrekousis, N. Mihalopoulos, **K. Kourtidis**, B. Rappengluck, E. Gerasopoulos and C. Zerefos, Spatial and temporal variability of tropospheric ozone (O₃) in the boundary layer above the Aegean Sea (Eastern Mediterranean), *J. Geophys. Res.*, 107, D18, 10.1029/2000JD000081, 14 pages, 2002.

23. Balis D., C. S. Zerefos, **K. Kourtidis**, A.F. Bais, A. Hofzumahaus, A. Kraus, R. Schmitt, M. Blumthaler, and G.P. Gobbi, Measurements and modeling of photolysis rates during PAUR campaign, *J. Geophys. Res.*, 107, D18, 8138, DOI: 10.1029/2000JD000136, 12 pages, 2002.

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25. Zanis P., **K. Kourtidis**, B. Rappenglueck, C. Zerefos, D. Melas, D. Balis, R. Schmitt, S. Rapsomanikis, Y. Doukelis, P. Fabian and I. Isaksen, A case study on the possible link between surface ozone photochemistry and total ozone during the PAUR experiment at Crete – Comparison of observations with box model calculations, *J. Geophys. Res.*, 107, D18, 8136, DOI: 10.1029/2000JD000137, 13 pages, 2002.

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34. Kelektsoğlu K., **K. Kourtidis**, D. S. Balis and S. Rapsomanikis, A 1-year remote sensing study of radiative effects of aerosol and clouds over the NE Mediterranean, *Int. J. Remote Sens.*, 1-16, doi:10.1080/01431161.2010.549524 2011.
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36. Georgoulas, A. K. and **Kourtidis, K. A.**: On the aerosol weekly cycle spatiotemporal variability over Europe, *Atmos. Chem. Phys.*, 11, 4611-4632, doi:10.5194/acp-11-4611-2011, 2011.
37. Georgoulas, A. K. and **Kourtidis, K. A.**: A high resolution satellite view of the aerosol weekly cycle variability over Central Europe, *Atmospheric Research*, 107, 145-160, doi:10.1016/j.atmosres.2012.01.003, 2012.

38. Georgoulas, A. K., **Kourtidis, K. A.**, Kosmidis E., Despotakis F. and Symeonidis P.: AMFIC-WSDDB: a web database for hosting and easy retrieval of atmospheric data from satellites, *Computers and Geosciences*, 48, 57-66, DOI/10.1016/j.cageo.2012.05.001, 2012.
39. Giannaros T. M., Melas D., Daglis I. A., Keramitsoglou I., **Kourtidis K.**: Numerical study of the urban heat island over Athens (Greece) with the WRF Model, *Atmos. Environ.*, 73, 103-111, 2013.
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43. Amiridis V., E. Marinou, A. Tsekeri, U. Wandinger, A. Schwartz, E. Giannakaki, R-E Mamouri, P. Kokkalis, I. Biniotoglou, S. Solomos, T. Herekakis, S. Kazadzis, E. Gerasopoulos, D. Balis, A. Papayannis, C. Kontoes, **K. Kourtidis**, N. Papagiannopoulos, L. Mona, G. Pappalardo, O. LeRille, and A. Ansmann, LIVAS: a 3D multi-wavelength aerosol/cloud climatology based on CALIPSO and EARLINET, *Atmos. Chem. Phys.*, 15, 7127-7153, 2015.
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46. Rapsomanikis S., G. Loupa, A. Trepekli, **K. Kourtidis**: Energy flux parametrization as an opportunity to get UHI insights: the case of Athens, Greece (Thermopolis 2009 Campaign). *Sci. Total Env.*, 542, 136-143, 2015.
47. Alexandri G., A. K. Georgoulas, P. Zanis, E. Katragkou, A. Tsikerdekis, **K. A. Kourtidis**, C. Meleti: On the ability of RegCM4 regional climate model to simulate surface solar radiation patterns over Europe: An assessment using satellite-based observations, *Atmos. Chem. Phys.*, 15, 13195-13216, 2015.

48. Kastelis N. and **K. Kourtidis**: Characterisation of the atmospheric electric field and correlation with CO₂ at a rural site in southern Balkans, *Earth, Planets and Space*, 68:3, DOI 10.1186/s40623-016-0379-3, 2016.
49. Georgoulas A.K., Alexandri G., **Kourtidis K.**, Leliveld J., Zanis P., Amiridis V., Differences between the MODIS Collection 6 and 5.1 aerosol datasets over the greater Mediterranean region, *Atmos. Environ.*, 147, 310-319, doi:10.1016/j.atmosenv.2016.10.014, 2106.
50. A. K. Georgoulas, G. Alexandri, **K. A. Kourtidis**, J. Lelieveld, P. Zanis, U. Pöschl, R. Levy, V. Amiridis, E. Marinou, A. Tsikerdekis, Spatiotemporal variability and contribution of different aerosol types to the Aerosol Optical Depth over the Eastern Mediterranean, *Atmos. Chem. Phys.*, 16, 13853-13884, doi:10.5194/acp-16-13853-2016, 2016.
51. Stathopoulos S., A. K. Georgoulas, **K. Kourtidis**, Space-borne observations of aerosol - cloud relations for cloud systems of different heights, *Atmos. Res.* 183, 191-201, 2017.
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53. Alexandri G., A. Georgoulas, C. Meleti, D. Balis, **K. Kourtidis**, A. Sanchez-Lorenzo, J. Trentmann, P. Zanis: A high resolution satellite view of surface solar radiation over the climatically sensitive region of Eastern Mediterranean, *Atmospheric Research*, 188, 107-121, doi:10.1016/j.atmosres.2016.12.015, 2017.
- 54.Kourtidis K.**, A. K. Georgoulas, B. Mijling, R. van der A, Q. Zhang, J. Ding: A new method for deriving trace gas emission inventories from satellite observations: The case of SO₂ over China, *Science of the Total Environment*, 612, 923–930, 2018.
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60. Sogacheva L., G. de Leeuw¹, E. Rodriguez, P. Kolmonen, A. K. Georgoulas, G. Alexandri, **K. Kourtidis**, E. Proestakis, E. Marinou, V. Amiridis, Y. Xue, and R. J. van der A, Spatial and seasonal variations of aerosols over China from two decades of multi-satellite observations – Part 1: ATSR (1995–2011) and MODIS C6.1 (2000–2017), *Atmos. Chem. Phys.*, 18, 11389-11407, <https://doi.org/10.5194/acp-18-11389-2018>, 2018.

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