

CURRICULUM VITAE

ANTONIS GIKIKAS

Dr. Atmospheric Sciences and Environment

ASSISTANT RESEARCHER

*Research Centre for Atmospheric Physics and Climatology
Academy of Athens*

ΑΚΑΔΗΜΙΑ



ΑΘΗΝΑΝ

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BIOGRAPHICAL INFORMATION

Personal information

Name	Antonis Gkikas
Birth:	11 th December 1979, Athens, Greece
Nationality:	Greek
Current Position:	Assistant Researcher (Research Centre for Atmospheric Physics and Climatology, Academy of Athens)
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Researcher-ID	F-4184-2017
Scopus ID	35757496400
ResearchGate	https://www.researchgate.net/profile/Antonis-Gkikas
LinkedIn	https://www.linkedin.com/in/antonis-gkikas-49b10a72/
ORCID	https://orcid.org/0000-0002-4137-0724
Google Scholar	https://scholar.google.com/citations?user=i2dAIaMAAAAJ&hl=en

Education

2008-2012	<i>PhD in Atmospheric Sciences and Environment</i>
Institute:	<i>Department of Physics, University of Ioannina</i>
PhD thesis:	<i>Study of aerosol episodes over the broader area of the Mediterranean basin based on contemporary satellite data</i>
Supervisor:	<i>Nikos Hatzianastassiou</i>
Link:	https://www.didaktorika.gr/eadd/handle/10442/30067
2004-2007	<i>MSc in Meteorology, Climatology and Atmospheric Environment</i>
Institute:	<i>Department of Physics, University of Ioannina</i>
MSC thesis:	<i>Study of aerosol optical properties in the broader area of the Mediterranean basin</i>
Supervisor:	<i>Nikos Hatzianastassiou</i>
1999-2004	<i>BSc in Natural Resources and Environmental Engineering</i>
Institute:	<i>Department of Natural Resources and Environmental Engineering, Technological Institute of Crete (Branch of Chania)</i>
BSc thesis:	<i>Atmospheric weather prediction models</i>
Supervisor:	<i>Emmanouil Lekkas</i>

Positions

2023 – present	<i>Assistant Researcher – Research Centre for Atmospheric Physics and Climatology [Academy of Athens]</i>
2021 – 2024	<i>Principal Investigator of the ATLANTAS project (H.F.R.I.), [IAASARS/NOA]</i>
2020 – 2022	<i>Postdoctoral Researcher (member of the ReACT team), [IAASARS/NOA]</i>
2019-2020	<i>Postdoctoral Researcher (member of the ERC D-TECT), [IAASARS/NOA]</i>
2017-2019	<i>Marie Curie Postdoctoral Fellow, [IAASARS/NOA]</i>
2017	<i>Postdoctoral Researcher [IERSD/NOA]</i>
2014-2016	<i>Marie Curie Postdoctoral Fellow, [Earth Sciences Department/BSC]</i>
2012-2014	<i>Postdoctoral Researcher, [Physics Department/University of Ioannina]</i>
2012-2014	<i>External collaborator, [Department of Environment/ University of Aegean]</i>
2012-2013	<i>External collaborator, [IAASARS/NOA]</i>
2012	<i>External collaborator, [IERSD/NOA]</i>
2011-2012	<i>External collaborator, [Department of Chemistry/University of Crete]</i>
2008-2012	<i>PhD candidate, [Laboratory of Meteorology/Physics Department/University of Ioannina]</i>
2003	<i>Meteorologist [Air force military base, Souda, Greece; Practical Training]</i>

RESEARCH**Expertise fields**

- Aerosol optical and microphysical properties based on spaceborne and ground-based retrievals relying on passive and active remote sensing techniques
- Spatiotemporal variability of aerosol loads at regional and global scales
- Aerosol-radiation interactions
- Atmospheric-dust regional models
- Dust impacts on atmospheric processes at short- and long-temporal scales
- Data assimilation of dust observations
- Atmospheric Physics
- Meteorology - Climatology

Participation in research projects

A/A	Acronym	Funding	Duration	Role
1	CACTUS	EUMETSAT	2025-present	• Principal Investigator
2	CAIRO	World Bank	2026-present	• Development of an air-quality operational system for the Cairo metropolitan area
3	CLIMPACT-II	GSRI	2024-present	• MIDAS satellite dataset Dust trends in the E. Mediterranean
4	SUSTAINET	ERASMUS+	2025-present	Green Business Innovation Hubs
5	SAT-AOD-TREND	EUMETSAT	2024-2025	• Principal Investigator

				<ul style="list-style-type: none"> Long-term dust trends (2007-2023) in the broader Mediterranean region as obtained by diverse spaceborne EO datasets
6	DELOS	Initiative 21	2025-2026	Air – quality satellite observations
7	CAMS2_82	CAMS	2023-present	<ul style="list-style-type: none"> Evaluation and quality control (EQA) of global products Assesment of desert dust outbreaks Spatial representativeness of air-quality stations
8	BIOASTY	GSRI	2023-2024	<ul style="list-style-type: none"> Heatwaves future projections based on CMIP5 GCMs
9	ADD-CROSS	EUMETSAT	2021-2023	<ul style="list-style-type: none"> WP manager Evaluation of aerosol and meteorological outputs derived by CAMS and IFS
10	NEWTON	ESA	2021-2022	<ul style="list-style-type: none"> co-PI of the project
11	ATLANTAS	H.F.R.I.	2021-2024	<ul style="list-style-type: none"> Principal Investigator
12	ASKOS	ESA	2021-2022	<ul style="list-style-type: none"> WP manager (Synthesis and Recommendations)
13	CORAL	ESA	2020-2021	<ul style="list-style-type: none"> WP manager (Assimilation of Aeolus wind profiles in regional numerical weather model)
14	EΔBM34	NSRF 2014-2020	2020-2021	<ul style="list-style-type: none"> Aerosols' impact of the radiation budget of the Earth-Atmosphere system
15	D-TECT	ERC	2017-2022	<ul style="list-style-type: none"> Development of a global dust optical depth dataset
16	VADAM	ESA	2018-2021	<ul style="list-style-type: none"> Cal/Val of Aeolus L2A products
17	ACROSS	ESA	2022-2025	<ul style="list-style-type: none"> Cal/Val of EarthCARE satellite products Exploitation of EarthCARE satellite products Upgrade of the ESA-LIVAS dataset
18	PANACEA	EU/National	2018-2022	<ul style="list-style-type: none"> Cal/Val of Aeolus L2A products
19	inDust	EU (COST)	2017-2021	<ul style="list-style-type: none"> Member of the management committee Development of the dust catalogue including spaceborne and ground-based observations
20	DUST-GLASS	H2020-MSCA-IF-2016	2017-2019	<ul style="list-style-type: none"> Marie Curie Fellow
21	Meteorological forecasts	NOA	2017	<ul style="list-style-type: none"> Analysis of desert dust outbreaks
22	MDRAF	Marie-Curie FP7-PEOPLE-IEF	2014-2016	<ul style="list-style-type: none"> Marie Curie Fellow
23	THALIS	NSRF	2012-2014	<ul style="list-style-type: none"> Study of optical and microphysical aerosol properties in the broader Greek area

24	LIVAS	ESA	2012	<ul style="list-style-type: none"> Processing of satellite data
25	DEUCALION	NSRF	2012-2014	<ul style="list-style-type: none"> Development of educational tools, related to earthquakes and natural disasters, for students in elementary schools
26	LIFE + PM3	EU	2011-2012	<ul style="list-style-type: none"> Analysis of aerosol satellite data in the Eastern Mediterranean
27	ACI-UV	EU	2011-2012	<ul style="list-style-type: none"> Analysis of satellite data for atmospheric constituents
28	EPIRUS-AEROSOL	University of Ioannina	2008-2009	<ul style="list-style-type: none"> Analysis of aerosol optical properties in the NW Greece
29	RISKMED	Intereg IIIB	2006-2008	<ul style="list-style-type: none"> Development of an early weather warning system in NW Greece

TEACHING EXPERIENCE

Period	Course	Course program	Institution
2018-2019	Fundamentals of remote sensing	MSc SSTA	UoP/NOA
Description	<ul style="list-style-type: none"> Principles of remote sensing for monitoring aerosol particles based on ground-based and spaceborne observations Aerosol optical and microphysical properties Retrieval algorithms Scientific applications 		

Period	Course	Course program	Institution
2017-2018	Fundamentals of remote sensing	MSc SSTA	UoP/NOA
Description	<ul style="list-style-type: none"> Principles of remote sensing for monitoring aerosol particles based on ground-based and spaceborne observations Aerosol optical and microphysical properties Retrieval algorithms Scientific applications 		

Period	Course	Course program	Institution
2017-2018	Advanced space applications	MSc SSTA	UoP/NOA
Description	<ul style="list-style-type: none"> Supervision of MSc students performing a small scale research project DUst transport over the tRopical ATlantic OceaN (DURATION) 		

Period	Course	Course program	Institution
2018	Vertical and columnar aerosol measurements	2nd Summer School	HAAR
Description	<ul style="list-style-type: none"> Aerosol classification techniques Principles of remote sensing Spaceborne and ground-based instruments Desert dust outbreaks (observations, modelling, impact on the radiation budget and atmospheric processes). 		

Period	Course	Course program	Institution
2005-2014	Laboratory of Atmospheric Physics	Physics Department	UoI

Description	<ul style="list-style-type: none"> • Operation of meteorological instruments • Meteorological observations • Altitude dependent variations of pressure and density • Pressure and altitude calculations within the atmosphere • Atmospheric Thermodynamics • Water phases and heat transfer
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SCHOLARSHIPS – GRANTS

Title:	<i>Effects of Mediterranean desert dust outbreaks on radiation, atmospheric dynamics and forecasting accuracy of a numerical mesoscale model</i>
Acronym:	MDRAF
Number:	622662
URL:	CORDIS
Period:	May 2014 – April 2016
Funding scheme:	FP7-PEOPLE-2013-IEF - Marie-Curie Action: "Intra-European fellowships for career development"
Host Institute:	Barcelona Supercomputing Center (BSC), Spain
Budget:	166 336,20 €

Title:	<i>Improving global dust prediction and monitoring through data assimilation of satellite-based dust aerosol optical depth</i>
Acronym:	DUST-GLASS
Number:	749461
URL:	CORDIS
Period:	May 2017 – April 2019
Funding scheme:	H2020-MSCA-IF-2016 Marie Skłodowska-Curie Individual Fellowships
Host Institute:	National Observatory of Athens (NOA), Greece
Budget:	164653,20 €

Title:	<i>Assessment of naTural and ANThropogenic Aerosols impact on climate</i>
Acronym:	ATLANTAS
Number:	00544
URL:	H.F.R.I.
Period:	April 2021 – March 2024
Funding scheme:	2nd Call for H.F.R.I. Research Projects to support Post-doctoral Researchers
Host Institute:	National Observatory of Athens (NOA), Greece
Budget:	189547,00 €

Title:	<i>Assessment of tropospheric aerosols impact on the radiation budget at planetary scale</i>
Period:	March 2020 – November 2021
Funding scheme:	NSRF 2014-2020
Host institute:	University of Ioannina
Budget:	50000 €

BOOKS

- Translation (in Greek): **Understanding Weather and Climate**, Edward Aguado and James E. Burt, pp. 576, Sixth Edition, Prentice Hall¹. [**Supervisors:** Prof. Aristeides Bartzokas, Assistant Professor: Χρήστος Λώλης, **Publisher:** [IWN](#)].

RESEARCH

PhD Thesis

Institute	University of Ioannina
Department	Physics
Title	<i>Study of aerosol episodes over the broader area of the Mediterranean basin based on contemporary satellite data</i>
Supervisor	Nikos Hatzianastassiou
Link	https://www.didaktorika.gr/eadd/handle/10442/30067

Publications

1. A.K. Gupta, J.F. Kok, V. Amiridis, **A. Gkikas**, K. Rizos, E. Proestakis, S.-A. Logothetis, E. Marinou, and C. Pérez García-Pando: «**A global decline in atmospheric dust during the 21st century**», Sci. Adv., 12, <https://doi.org/10.1126/sciadv.aef5691>, 2026.
2. A. Papetta, C. Herrero del Barrio, S.Y. Aslanoğlu, R.-T. Chadoulis, G. Charalampous, S. Herrero-Anta, D. Kouklaki, M. Mytilinaios, A. Moustaka, E. Proestakis, V. Amiridis, C. Spyrou, **A. Gkikas**, M. Pikridas, M. Kezoudi, F. Marengo, J. Sciare, S. Vandenbussche, S. Solomos, S. Kazadzis, and I. Fountoulakis: «**Source-Dependent Optical and Mineral Signatures of Dust Outbreaks over the Mediterranean**», Atmos. Chem. Phys., 26, 12395–12434, <https://doi.org/10.5194/acp-26-12395-2026>, 2026.
3. N. Papadimitriou, I. Fountoulakis, **A. Gkikas**, K. Papachristopoulou, A. Kazantzidis, S. Kazadzis, S. Pfenninger, J. Kapsomenakis, K. Eleftheratos, A.A. Argiriou, L. Doppler, and C.S. Zerefos: «**PV power modelling using solar radiation from ground-based measurements and CAMS: Assessing the diffuse**

- component related uncertainties leveraging the Global Solar Energy Estimator (GSEE)»,** Atmos. Meas. Tech., 19, 1227–1244, <https://doi.org/10.5194/amt-19-1227-2026>, 2026.
4. A. Moustaka, N. Siomos, S. Kazadzis, E. Proestakis, K.A. Voudouri, A. Lopatin, O. Dubovik, K. Tourpali, C. Zerefos, V. Amiridis, and **A. Gkikas**: «**Enhancing dust aerosols monitoring capabilities across North Africa and the Middle East using the A-Train satellite constellation**», Atmos. Meas. Tech., 19, 1201–1225, <https://doi.org/10.5194/amt-19-1201-2026>, 2026. **[Highlight paper]**
 5. K. Rizos, E. Proestakis, T. Georgiou, **A. Gkikas**, E. Marinou, P. Paschou, K.A. Voudouri, A. Tsikerdekis, D.P. Donovan, G.-J. van Zadelhoff, A. Benedetti, H. Baars, A. Floutsi, N. Benas, M. Stengel, C. Retscher, E. Malina, and V. Amiridis: «**Derivation and validation of a refined dust product from Aeolus (L2A+)**», Atmos. Meas. Tech., 19, 699–728, <https://doi.org/10.5194/amt-19-699-2026>, 2026.
 6. P. Paschou, N. Siomos, E. Marinou, **A. Gkikas**, S. M. Idrissa, D. T. Quaye, D.D. Fiogbe Attannon, K.A. Voudouri, C. Meleti, D.P. Donovan, G. Georgoussis, T. Parrinello, T. Fehr, J. von Bismarck, and V. Amiridis: «**Validation of the Aeolus L2A products with the eVe reference lidar measurements from the ASKOS/JATAC campaign**», Atmos. Meas. Tech., 18, 4731–4754, <https://doi.org/10.5194/amt-18-4731-2025>, 2025.
 7. E. Proestakis, K. Papachristopoulou, T. Georgiou, S.E. Chatoutsidou, M. Lazaridis, **A. Gkikas**, I. Fountoulakis, I. Tsikoudi, M.P. Petrakis, and V. Amiridis, V.: «**Atmospheric dust and air quality over large-cities and megacities of the world**», Atmos. Chem. Phys., 25, 14777–14823, <https://doi.org/10.5194/acp-25-14777-2025>, 2025.
 8. E. Proestakis, V. Amiridis, C.P. García-Pando, S. Tsyro, J. Griesfeller, **A. Gkikas**, T. Georgiou, M.G. Ageitos, J. Escribano, S. Myriokefalitakis, E.B. Masso, E. Di Tomaso, S. Basart, J.-B. W. Stuut, and A. Benedetti: «**Quantifying dust deposition over the Atlantic Ocean**», Earth Syst. Sci. Data, 17, 4351–4395, <https://doi.org/10.5194/essd-17-4351-2025>, 2025.
 9. S. Kazadzis, I. Fountoulakis, A. Damialis, A. Masoom, K. Papachristopoulou, S. Gilles, M. Collaud Coen, F. Tummon, B. Crouzy, B. Clot, Y. Pat, M.-C. Brüggén, S. Nyeki, I.-P. Raptis, S. Solomos, **A. Gkikas**, A. Moustaka, N. Kouremeti, C. A. Akdis: «**Aerosol Measurements and Decadal Changes: The Role of Climatic Changes and How It Reflects in Respiratory Allergies and Asthma**», Allergy, 0:1-16, <https://doi.org/10.1111/all.16602>, 2025.
 10. A. Kakouri, T. Kontos, G. Grivas, G. Filippis, M.-B. Korrás-Carraca, C. Matsoukas, **A. Gkikas**, E. Athanasopoulou, O. Speyer, C. Chatzidiakos, E. Gerasopoulos: «**Spatiotemporal modeling of long-term PM2.5 concentrations and population exposure in Greece, using machine learning and statistical methods**», *Science of The Total Environment*, 958, <https://doi.org/10.1016/j.scitotenv.2024.178113>, 2025.

11. N. Mahowald, P. Ginoux, G.S. Okin, J. Kok, S. Albani, Y. Balkanski, M. Chin, G. Bergametti, T.F. Eck, C.P. García-Pando, **A. Gkikas**, M.G. Ageitos, D. Kim, M. Klose, S. LeGrand, L. Li, B. Marticorena, R. Miller, C. Ryder, C. Zender, Y. Yu: «**Letter to the Editor regarding Chappell et al., 2023, “Satellites reveal Earth's seasonally shifting dust emission sources”**», *Science of The Total Environment*, 949; <https://doi.org/10.1016/j.scitotenv.2024.174792>, 2024.
12. V. Amiridis, S. Kazadzis, **A. Gkikas**, K. A. Voudouri, D. Kouklaki, M.-E. Koukouli, K. Garane, A. K. Georgoulas, S. Solomos, G. Varlas, A. Kampouri, D. Founda, B. E. Psiloglou, P. Katsafados, K. Papachristopoulou, I. Fountoulakis, P.-I. Raptis, T. Georgiou, A. Gialitaki, E. Proestakis, A. Tsekeri, E. Drakaki, E. Marinou, E. Giannakaki, S. Misios, J. Kapsomenakis, K. Eleftheratos, N. Hatzianastassiou, P. Kalabokas, P. Zanis, M. Vrekoussis, A. Papayannis, A. Kazantzidis, K. Kourtidis, D. Balis, A. F. Bais, C. Zerefos: «**Natural Aerosols, Gaseous Precursors and Their Impacts in Greece: A Review from the Remote Sensing Perspective**», *Atmosphere*, 15(7), 753; <https://doi.org/10.3390/atmos15070753>, 24, 2077–2097, 2024.
13. E. Proestakis, **A. Gkikas**, T. Georgiou, A. Kampouri, E. Drakaki, C.L. Ryder, F. Marengo, E. Marinou, and V. Amiridis: «**A near-global multiyear climate data record of the fine-mode and coarse-mode components of atmospheric pure dust**», *Atmos. Meas. Tech.*, 17, 3625–3667, <https://doi.org/10.5194/amt-17-3625-2024>, 2024.
14. A. Moustaka, M.-B. Korras-Carraca, K. Papachristopoulou, M. Stamatis, I. Fountoulakis, S. Kazadzis, E. Proestakis, V. Amiridis, K. Tourpali, T. Georgiou, S. Solomos, C. Spyrou, C. Zerefos, **A. Gkikas**: «**Assessing Lidar Ratio Impact on CALIPSO Retrievals Utilized for the Estimation of Aerosol SW Radiative Effects across North Africa, the Middle East, and Europe**», *Remote Sens.*, 16(10), 1689; <https://doi.org/10.3390/rs16101689>, 2024.
15. I. Fountoulakis, A. Tsekeri, S. Kazadzis, V. Amiridis, A. Nersesian, M. Tschla, E. Proestakis, **A. Gkikas**, K. Papachristopoulou, V. Barlakas, C. Emde, and B. Mayer: «**A sensitivity study on radiative effects due to the parameterization of dust optical properties in models**», *Atmos. Chem. Phys.*, 24, 4915–4948, <https://doi.org/10.5194/acp-24-4915-2024>, 2024.
16. R.A.R. Digby, N.P. Gillett, A.H. Monahan, K. von Salzen, **A. Gkikas**, Q. Song, and Z. Zhang: «**How well do Earth System Models reproduce observed aerosol changes during the Spring 2020 COVID-19 lockdowns?**», *Atmos. Chem. Phys.*, 24, 2077–2097, <https://doi.org/10.5194/acp-24-2077-2024>, 2024.
17. V. Amiridis, A. Kampouri, **A. Gkikas**, S. Misios, A. Gialitaki, E. Marinou, M. Rennie, A. Benedetti, S. Solomos, P. Zanis, O. Vasardani, K. Eleftheratos, P. Paschou, T. Georgiou, S. Scollo, L. Mona, N. Papagiannopoulos, C. Retscher, T. Parrinello, and A.G. Straume: «**Aeolus impact on Volcanic Ash**

- early warning systems for Aviation», *Sci Rep* **13**, 7531, <https://doi.org/10.1038/s41598-023-34715-6>, 2023.
18. L. Mona, V. Amiridis, E. Cuevas, **A. Gkikas**, S. Trippetta, S. Vandenbussche, A. Benedetti, P. Dagsson-Waldhauserova, P. Formenti, A. Haefele, S. Kazadzis, P. Knippertz, B. Laurent, F. Madonna, S. Nickovic, N. Papagiannopoulos, G. Pappalardo, C. Pérez García-Pando, T. Popp, S. Rodríguez, A. Sealy, N. Sugimoto, E. Terradellas, A. Vukovic Vimic, B. Weinzierl, and S. Basart: **«Observing mineral dust in Northern Africa, the Middle East and Europe: Current capabilities and challenges ahead for the development of dust services»**, *Bulletin of the American Meteorological Society*, doi: <https://doi.org/10.1175/BAMS-D-23-0005.1>, 2023.
 19. S. Solomos, C. Spyrou, A. Baretto, E. Cuevas, S. Rodríguez, Y. González, M. Neophytou, P. Mouzourides, N. Bartsotas, C. Kalogeri, S. Nickovic, G. Pejanovic, B. Cvetkovic, V. Amiridis, O. Sykioti, **A. Gkikas**, C. Zerefos: **«The Development of METAL-WRF Regional Model for the Description of Dust Mineralogy in the Atmosphere»**, *Atmosphere*, **14**, 615, <https://doi.org/10.3390/atmos14111615>, 2023.
 20. M. Mytilinaios, S. Basart, S. Ciamprone, J. Cuesta, C. Dema, E. Di Tomaso, P. Formenti, **A. Gkikas**, O. Jorba, R. Kahn, C. Pérez García-Pando, S. Trippetta, and L. Mona: **«Comparison of dust optical depth from multi-sensor products and MONARCH (Multiscale Online Non-hydrostatic Atmosphere Chemistry) dust reanalysis over North Africa, the Middle East, and Europe»**, *Atmos. Chem. Phys.*, **23**, 5487–5516, <https://doi.org/10.5194/acp-23-5487-2023>, 2023.
 21. P. Kiriakidis, **A. Gkikas**, G. Papangelis, T. Christoudias, J. Kushta, E. Proestakis, A. Kampouri, E. Marinou, E. Drakaki, A. Benedetti, M. Rennie, C. Retscher, A.G. Straume, A. Dandocsi, J. Sciare, and V. Amiridis: **«The impact of using assimilated Aeolus wind data on regional WRF-Chem dust simulations»**, *Atmos. Chem. Phys.*, **23**, 4391–4417, <https://doi.org/10.5194/acp-23-4391-2023>, 2023.
 22. **A. Gkikas**, A. Gialitaki, I. Biniotoglou, E. Marinou, M. Tsihla, N. Siomos, P. Paschou, A. Kampouri, K.A. Voudouri, E. Proestakis, M. Mylonaki, C.-A. Papanikolaou, K. Michailidis, H. Baars, A. G. Straume, D. Balis, A. Papayannis, T. Parrinello, and V. Amiridis: **«First assessment of Aeolus Standard Correct Algorithm particle backscatter coefficient retrievals in the eastern Mediterranean»**, *Atmos. Meas. Tech.*, **16**, 1017–1042, <https://doi.org/10.5194/amt-16-1017-2023>, 2023.
 23. A. Monteiro, S. Basart, S. Kazadzis, **A. Gkikas**, S. Vandenbussche, A. Tobias, C. Gama, C. Pérez García-Pando, E. Tarradellas, G. Notas, N. Middleton, J. Kushta, V. Amiridis, K. Lagouvardos, P. Kosmopoulos, V. Kotroni, M. Kanakidou, N. Mihalopoulos, N. Kalivitis, P. Dagsson-Waldhauserová, H. El-Askary, K. Sievers, T. Giannaros, L. Mona, M. Hirtl, P. Skomorowski, S. Nickovic, A. Votsis, T. H. Virtanen, T. Christoudias, Biagio Di Mauro, S. Trippetta, S. Kutuzov, O. Meinander: **«Multi-sectoral impact**

- assessment of an extreme African dust episode in the Eastern Mediterranean in March 2018**», *Science of The Total Environment*, Vol. 843, <https://doi.org/10.1016/j.scitotenv.2022.156861>, 2022.
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Metrics

A total of **63 publications** in peer-reviewed journals

- First or second author on **16 papers (25%)**
- Last author on **3 papers (5%)**
- **1,773 citations**, h-index: **25**. Source: **Web of Science** [Last updated: 19 October 2026]
- **1,910 citations**, h-index: **26**. Source: **Scopus** [Last updated: 19 October 2026]
- **2,620 citations**, h-index: **29**. Source: **Google Scholar** [Last updated: 19 October 2026]

Web of Science

Web of Science Core Collection metrics

Citation counts are from Web of Science Core Collection.

67

Publications

1,773

Sum of Times
Cited

25

H-Index

Times Cited and Publications Over Time

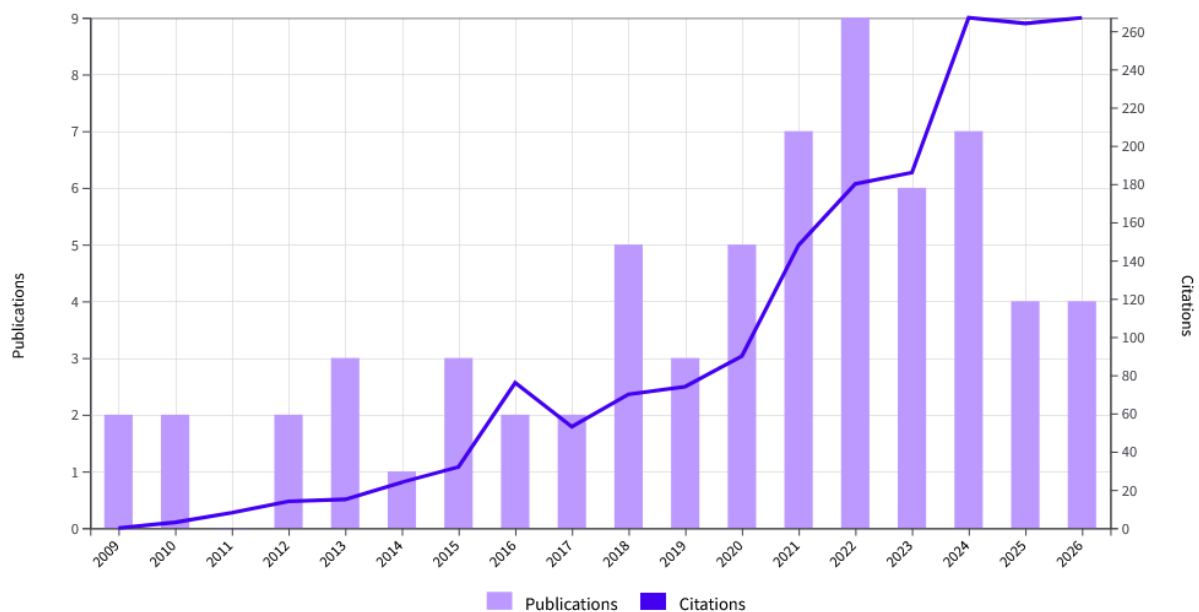


Figure 1: Time evolution of the number of publications (purple bars) and citations (blue curve) (Source: *Web of Science*).

Scopus

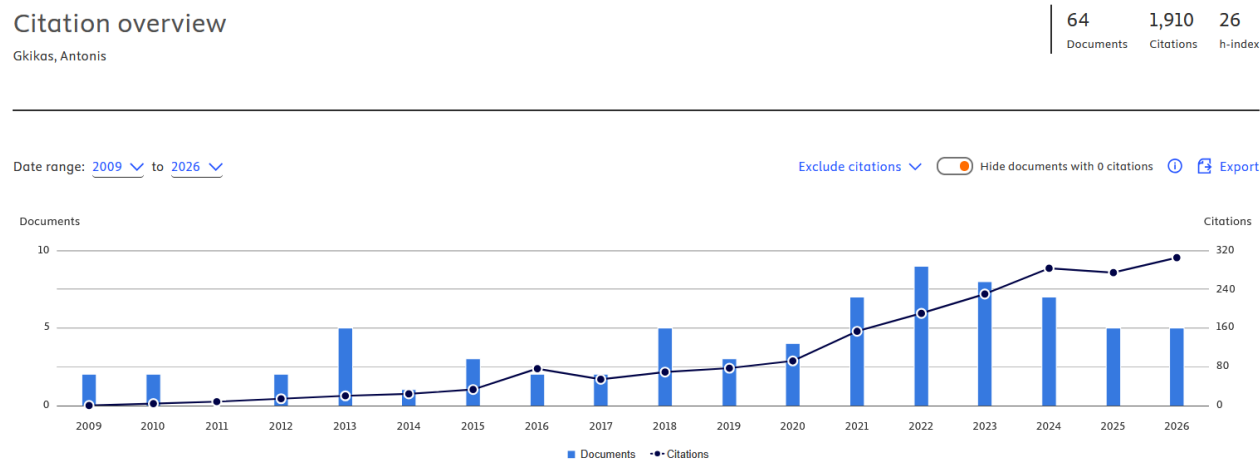


Figure 2: Time evolution of the number of publications (blue bars) and citations (black curve) (Source: Scopus).

Google Scholar

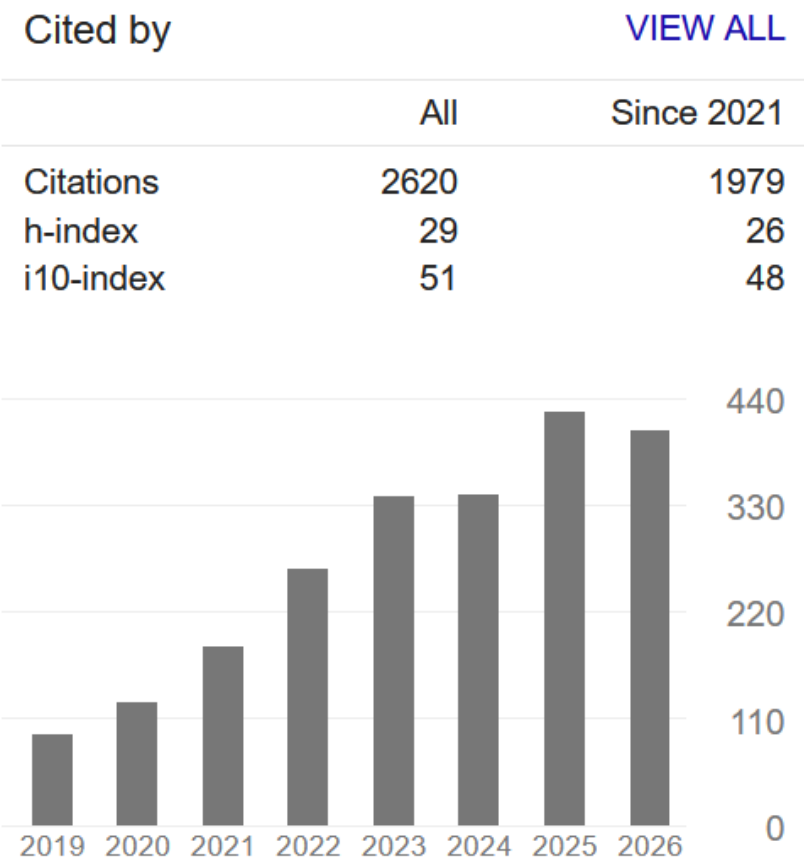


Figure 3: Time evolution of citations (Source: Google Scholar).

Conference announcements

1. A. K. Gupta, J. F. Kok, R. Bennartz, V. Amiridis, A. Gkikas, K. Rizos, E. Proestakis, and C. P. García-Pando: **«What's Driving the Global Decline in Mineral Dust Emissions during the early 21st Century?»**, 107th Annual Meeting American Meteorological Society, 10 - 14 January 2027, Denver, USA, 2027.
2. A. K. Gupta, J. F. Kok, V. Amiridis, A. Gkikas, K. Rizos, E. Proestakis, S. Logothetis, E. Marinou and C. P. García-Pando: **« A global decline in atmospheric dust during the 21st century »**, 107th Annual Meeting American Meteorological Society, 10 - 14 January 2027, Denver, USA, 2027.
3. S.Bojinski, D. Leskow-Czyżewska, R. Skujina, N. Marsico, A.-M. Sundström, A. Gkikas, N. Fazzini, A. Vecoli: **«Better exploitation of atmospheric composition satellite data in applications: the EUMETSAT user engagement»**, EUMETSAT Meteorological Satellite Conference 2026, 21 - 25 September 2026, Darmstadt, Germany, 2026.
4. S. Solomos, C. Zerefos, A. Gkikas, I. Fountoulakis, J. Kapsomenakis, P. Katsafados and K. Eleftheratos: **«A modelling study on urban scale circulation, sea-breeze front and the possible origin of the unknown odor that affected Athens on 19 May 2026»**, MedCLIVAR2026, 21-25 September 2026, Limassol, Cyprus, 2026.
5. N. Marsico, A.-M. Sundström, D. Leskow-Czyżewska, N. Fazzini, A. Gkikas, A. Vecoli, S.-A. Logothetis, S. Bojinski, and R. Skujina: **«EUMETSAT Training Resources for Atmosphere Fires and Dust»**, European Meteorological Society, 6 - 11 September 2026, Utrecht, Netherlands, 2026.
6. N. Papadimitriou, I. Fountoulakis, S. Misios, A. Gkikas, J. Kapsomenakis, S. Kazadzis, A. Kazantzidis, and C. S. Zerefos: **«Impact of Climate Change on Solar PV power potential in the Eastern Mediterranean and Middle East»**, The European Conference on Sun Protection, EuroSun2026, 27 - 28 May 2026, Basel, Switzerland, 2026.
7. F. Mavroudis, A. Gkikas, D. Barahona, M. G. Ageitos, D. M. Leung, C. P. García-Pando, O. W. Haugvaldstad, G. Sotiropoulou: **«How well do climate models represent dust events over the Mediterranean, North Africa, and the Middle East?»**, EGU2026, 3 – 8 May 2026, Vienna, Austria, 2026.
8. A. Poupkou, I. Fountoulakis, N. Kalligeris, J. Kapsomenakis, N. Melis, S. Solomos, D. Athanasoulis, K. Boukouras, K. Douvis, C. Gkaraouni, A. Gkikas, P. Kalabokas, V. Koufolia, K. Lentas, E. Liadopoulos, C. Maris, N. Papadimitriou, C. Spyrou, T. Stavraka, C. Synolakis, T. Vakoulis, C. S. Zerefos: **«An Emblematic, Transdisciplinary, and Multi-Hazard Monitoring Infrastructure on Delos Island (Greece) for the Protection of UNESCO World Heritage Monuments from Climate Change»**, EGU2026, 3 – 8 May 2026, Vienna, Austria, 2026.
9. P. Kalabokas, C. Douvis, J. Kapsomenakis, A. Gkikas, D. Boulanger, V. Thouret: **«Upper tropospheric ozone variability over Greece»**, EGU2026, 3 – 8 May 2026, Vienna, Austria, 2026.

10. A. Moustaka, A. Gkikas, S.-A. Logothetis, J. Flemming, S. Rémy, M. Ades, K. Tourpali, V. Amiridis, and S. Kazadzis: «**Impact of Satellite AOD Assimilation on Aerosol Optical Depth and Long-Term Trends in CAMS reanalysis**», EGU2026, 3 – 8 May 2026, Vienna, Austria, 2026.
11. N. Papadimitriou, I. Fountoulakis, K. Douvis, S. Misios, A. Gkikas, S. Kazadzis, A. Kazantzidis, and C. S. Zerefos: «**Projected variability of PV energy production in the Eastern Mediterranean and Middle East: Assessing the impact of atmospheric aerosols**», EGU2026, 3 – 8 May 2026, Vienna, Austria, 2026.
12. A. Moustaka, A. Gkikas, S.-A. Logothetis, J. Flemming, S. Rémy, M. Ades, K. Tourpali, V. Amiridis, and S. Kazadzis: «**Two Decades of Aerosol Trends: Insights from CAMS reanalysis**», ACTRIS Science Conference 2026 | April 20-23, 2026 - Oslo, Norway, 2026.
13. N. Siomos, A. Moustaka, A. Gkikas, K.A. Voudouri, and S. Kazadzis: «**A methodology to calculate the columnar particle lidar ratio from Klett backscatter profiles and co-located aerosol optical depth data: Applications in satellite remote sensing**», ACTRIS Science Conference 2026 | April 20-23, 2026 - Oslo, Norway, 2026.
14. S.-A. Logothetis, A. Gkikas, N. Papadimitriou, I. Fountoulakis, S. Kazadzis, A. Kazantzidis, C. Lolis, E. Houssos, S. Misios, A. Moustaka, J. Kapsomenakis, S. Solomos, C. Zerefos: «**Dust trends in the Eastern Mediterranean and their potential links to solar energy production**», Task 16, IEA, PVPS, 27-29/4/2026, Athens.
15. A. Gkikas, S.-A. Logothetis, S. Kazadzis, A. Kazantzidis, C. Lolis, E. Houssos, S. Misios, A. Moustaka, J. Kapsomenakis, S. Solomos, I. Fountoulakis, C. Zerefos: «**Long-term variability of dust aerosol burden in the broader Eastern Mediterranean basin: Trends and driving mechanisms**», ACTRIS Science Conference 2026 | April 20-23, 2026 - Oslo, Norway, 2026.
16. A. Kumar Gupta, J. F. Kok, V. Amiridis, A. Gkikas, C. P. García-Pando, E. Proestakis, K. Rizos, S.-A. Logothetis, and E. Marinou: «**Reconstructing the 21st-Century dust cycle: Observational constraints and inverse modeling Insights**», AGU2025, 15 – 19 December 2025, New Orleans, Louisiana, USA, 2025.
17. I. Fountoulakis, K. Eleftheratos, A. Gkikas, D. Kouklaki, N. Papadimitriou, V. Amiridis, A. Papayiannis, and C. S. Zerefos: «**Aerosol optical properties in the UV spectral region over Athens, Greece**», MedGU 2025, 10 – 13 November 2025, Athens, Greece, 2025.
18. P. Paschou, E. Marinou, K.A. Voudouri, N. Siomos, A. Gkikas, J. von Bismarck, T. Fehr, V. Amiridis: «**Using the ESA eVe reference lidar for the cal/val of lidar instruments onboard ESA satellite missions**», COMECAP 2025, 28 September – 1 October 2025, Nicosia, Cyprus, 2025.
19. A.G. Progiou, I. Polychroni, M.-P.P. Nastou, I. Charalampopoulos, C. Benetatos, A. Gkikas, C. Spyrou, S. Solomos, K. Eleftheratos, S. Zerefos, P.T. Nastos: «**BIOASTY: Sustainable Urban Design for Climate Resilience**», COMECAP 2025, 28 September – 1 October 2025, Nicosia, Cyprus, 2025.

20. S. Kartsios, S. Misios, I. Mavropoulou, T. Kourantos, I. Kapsomenakis, I. Fountoulakis, A. Gkikas, S. Solomos, D. Kouklaki, P. Patlakas, K. Varotsos, E. Marinou, D. Bliziotis, N. Sergis, D. Vallianatos, S. Papatheochari, C. Giannakopoulos, P. Zanis, V. Amiridis, and C. Zerefos: **«ClimateHub: Seasonal to decadal predictions for national renewable energy management»**, COMECAP 2025, 28 September – 1 October 2025, Nicosia, Cyprus, 2025.
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22. J. Kapsomenakis, S. Misios, I. Fountoulakis, N. Papadimitriou, K. Douvis, C. Pantazis, T. Stavraka, A. Gkikas, S.-A. Logothetis, S. Solomos, E. Manolis, C. Zerefos: **«Investigating the potential effects of SRM employment on vegetation»**, COMECAP 2025, 28 September – 1 October 2025, Nicosia, Cyprus, 2025.
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9. Errera, Q., Arola, A., Benedictow, A., Bennouna, Y., Blake, L., Bouarar, I., Eskes, H. J., **Gkikas, A.**, Griesfeller, J., Ilić, L., Kapsomenakis, J., Kouyate, M., Langerock, B., Li, C. W. Y., Mortier, A., Parrington, M., Pitkänen, M. R. A., Pison, I., Ramonet, M., Richter, A., Schoenhardt, A., Schulz, M., Tarniewicz, J., Thouret, V., Tsikerdekis, A., Warneke, T., and Zerefos, C.: *Validation report of the CAMS near-real-time global atmospheric composition service: June–August 2024*, Copernicus Atmosphere Monitoring Service (CAMS) report, CAMS2_82_2023SC2_D82.1.1.12-JJA2024.pdf, December 2024.
10. Kapsomenakis, J., Arola, A., Benedictow, A., Bennouna, Y., Blake, L., Bouarar, I., Errera, Q., Eskes, H. J., **Gkikas, A.**, Griesfeller, J., Ilić, L., Kouyate, M., Langerock, B., Li, C. W. Y., Mortier, A., Pitkänen, M. R. A., Pison, I., Ramonet, M., Richter, A., Schoenhardt, A., Schulz, M., Tarniewicz, J., Thouret, V., Tsikerdekis, A., Warneke, T., and Zerefos, C.: *Validation report of the CAMS near-real-time global atmospheric composition service: March–May 2024*, Copernicus Atmosphere Monitoring Service (CAMS) report, CAMS2_82_2023SC2_D82.1.1.11-MAM2024.pdf, September 2024, doi:10.24380/qvu9-jau1.

ACADEMIC MENTORING OF EARLY-CAREER RESEARCHERS

- Co-supervision of the doctoral dissertation of PhD candidate Riccardo Ratta (Department of Physics and Earth Sciences, University of Ferrara)
 - Dissertation title: **Super-Resolution Techniques Based on Artificial Intelligence for Remote Sensing**
 - Co-supervising Professor: *Sebastiano Fabio Schifano*
- Co-supervision of the master's thesis of postgraduate student Faidon Mavroudis (Department of Physics, National and Kapodistrian University of Athens)
 - Thesis title: **Study of Desert Dust Episodes in the Mediterranean, North Africa, and the Middle East Using a Climate Model and Satellite Observations**
 - Co-supervisor: *Georgia Sotiropoulou (Assistant Professor)*
- Member of the examining committee for the doctoral dissertation defense of PhD candidate Anna Moustaka. Dissertation title: **“Characterization of Aerosol Optical Properties, Trends, and Radiative Effects from Regional to Global Scales Using Multiple Sensors”**, School of Sciences, Department of Physics, Aristotle University of Thessaloniki.
- Member of the examining committee for the doctoral dissertation defense of PhD candidate Charilaos Benetatos. Dissertation title: **“Changes in upper tropospheric humidity and their impact**

on cirrus clouds”, School of Sciences, Department of Geology and Geoenvironment, National and Kapodistrian University of Athens.

- Member of the Research & Training Support Group (RTSG) for PhD candidate Miguel Huerta Gómez. Dissertation title: **“Identification of dust properties from different sources using sun-photometry and their effects on spectral solar irradiance”**. Supervisors: Stelios Kazadzis (PMOD/WRC), Martin Wild (ETH).

RESEARCH COMMITTEE MEMBERSHIPS

- Member of the research proposal evaluation committee of the Research Council of Finland. RC25_02 Atmospheric Sciences Review Panel – Research Council of Finland, 2025.
- Member of the research proposal evaluation committee of the Research Council of Finland. RC26_02 Atmospheric Sciences Review Panel – Research Council of Finland, 2026.

ADMINISTRATIVE EXPERIENCE

- Data Manager, Research Centre for Atmospheric Physics and Climatology (2026 - present)
- Deputy Secretary, Technical Council of the Academy of Athens (2025 - 2028)

INVITED TALKS

1. **Antonis Gkikas**, Anna Gialitaki, George Papangelis, Pantelis Kiriakidis, Eleni Drakaki, Emmanouil Proestakis, Anna Kampouri, Eleni Marinou, Nikolaos Siomos, Peristera Paschou, Panagiotis Kosmopoulos, Kalliopi-Artemis Voudouri, Christiana Papanikolaou, Maria Mylonaki, Dimitris Balis, Alexandros Papayannis, Jonilda Kushta, Theodoros Christoudias, Christos Spyrou, Angela Benedetti, Michael Rennie, Anne Grete Straume, Christian Retscher, Alexandru Dandocsi, Jean Sciare, Vassilis Amiridis: **«Aeolus L2A Cal/Val studies in the framework of the Greek ACTRIS RI and exploitation of wind profiles assimilation towards advancing regional dust forecasts»**, *3rd Aeolus L2A virtual working meeting*, 16th December 2021. [[link](#)]
2. **Antonis Gkikas**: **«MIDAS global dust optical depth dataset: Development and applications»**, *inDust webinars*, April 2021. [[link](#)]
3. **Antonis Gkikas**: **«Dust climatology from remote sensing observations»**, *HARMONIA WP3 Workshop*, September 2023. [[link](#)]

PARTICIPATION IN EXPERIMENTAL CAMPAIGNS

- **THALIS:** «*Source identification and physicochemical properties of fine and ultrafine aerosols affecting the climate of Greece*» (Winter period, 2013-2014).
 - Instruments installation for monitoring urban particulate matter in the city of Ioannina
 - Filters sampling
 - Scientific analysis
- **ASKOS:** «*Support to the Aeolus Validation and Calibration Through Ground Based Observations in the Tropics*» (June-July 2020, Cabo Verde).
 - Cal/Val of Aeolus products
 - Manager of the working package “*Synthesis of Reports and Recommendations*”

CONFERENCE SCIENTIFIC COMMITTEES

- Co-chair of the [Numerical weather and climate prediction #2](#) of the [Aeolus Science Conference 2023](#) [22-26 May 2023, Rhodes, Greece]
- Nomination as a judge for the Outstanding Student and PhD candidate Presentation (OSPP) Award contest at the [EGU General Assembly 2022](#).
- Member of the [scientific committee](#) of the [Aeolus 3rd Anniversary Conference](#) [28th – 1st April 2022, Taormina, Italy]
- Co-chair of the [Science#2 session](#) in the [Aeolus 3rd Anniversary Conference](#) [28th – 1st April 2022, Taormina, Italy]
- Co-chair of the [Aerosols and data assimilation](#) Session in the EUMETSAT Meteorological Satellite Conference [19-23 September 2022, Brussels, Belgium]

PARTICIPATION IN UNIONS

- Member of the Hellenic Meteorological Society (EMTE)
- Member of the European Geosciences Union (EGU)
- Member of the American Geoscience Union (AGU)
- Member of the Hellenic Association for Aerosol Research (HAAR)
- Member of the Alumni Association of the Department of Natural Resources and Environmental Engineering

COLLABORATIONS

- European Space Agency (ESA)
- European Center of Mesoscale Weather Forecasts (ECMWF)
- European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- Royal Netherlands Meteorological Institute (KNMI)
- Barcelona Supercomputing Center (BSC)
- Leibniz Institute for Tropospheric Research (TROPOS)
- Cyprus Institute (Cyl)
- University of California, Los Angeles (UCLA)
- Institute of Environmental Assessment and Water Research (IDAEA-CSIC)
- National Observatory of Athens
- University of Ioannina
- Aristotle University of Thessaloniki (Τμήμα Φυσικής)
- University of Patras
- National Technical University of Athens
- University of Aegean
- University of Crete
- Institute for Environmental Research and Sustainable Development (IERSD), National Observatory of Athens (NOA)
- Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing (IAASARS), National Observatory of Athens (NOA)
- Meteorological Environmental Earth Observation (MEE0)
- EvenFlow
- Finnish Meteorological Institute (FMI)
- National and Kapodistrian University of Athens (NKUA) – Department of Physics