

IRENE ZYRICHIDOU (IZ)

SENIOR RESEARCH SCIENTIST
ENVIRONMENTAL PHYSICIST, MSc, PhD



PERSONAL DETAILS

Birthday 22/07/1980
Nationality Greek
Marital status Married, mother of one daughter

CONTACT

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REFERENCES

Available upon request

SOCIAL MEDIA LINKS (username: Irene Zyrichidou)

www.linkedin.com
www.academia.edu
www.researchgate.net
www.twitter.com

PERSONAL SUMMARY

IZ obtained her diploma in Physics at the Aristotle University of Thessaloniki in 2004 and her PhD in the field of Satellite remote sensing of atmospheric species in 2013. In 2007 she joined the Laboratory of Atmospheric Physics in the department of Applied and Environmental Physics at the Aristotle University of Thessaloniki where since 2013 she has been conducted research as environmental postdoc researcher, while recently she works at the Hellenic Open University as Collaborating Academic Staff Member. From 2007 onwards she has scientific involvement in many European and National research projects related with atmospheric chemistry, air quality and climate as well as a proven publication track record. She is well versed in writing scientific reports as well as custom code and algorithms in IDL data program language. She is highly qualified in satellite atmospheric observations diffusion, greatly experienced in the analysis, inter-comparison and validation of satellite observations of a wide range of atmospheric variables in order to attribute the sources of trace gases from space. Using a combination of satellite observations, modelling and field measurements she has recently focused on the creation of emission inventories in the South Eastern Mediterranean. She is proactive at work and has exceptional multi-tasking and organisational skills, all of which are imperative when working either independently or closely with researchers.

EDUCATION

2013 (Mar.) PhD in Atmospheric Physics (Aristotle University of Thessaloniki) titled "Satellite Remote Sensing of Atmospheric Species"
2006 (Oct.) MSc in Environmental Physics (Aristotle University of Thessaloniki)
2004 (Jun.) BSc in Physics (Aristotle University of Thessaloniki)
1998 (Jun.) High school graduation (Greek College of Thessaloniki)

Attendance of training courses and seminars

- ArcGIS seminars, AUTH-Marathon Data Systems, March-May 2018, Thessaloniki, Greece
- User Workshop GlobEmission, Emission estimates from satellite observations, 5 December 2013, ESA-ESRIN, Frascati, Italy
- Workshop on parameter estimation and inverse modeling, 22-24/10/2013, ECMWF, Reading, UK
- Advanced Atmospheric Training Course, European Space Agency (ESA), University of Oxford, 15-20/09/2008, Oxford, UK

WORK AND ACADEMIC EXPERIENCE

2022 (Jan) – today	Senior Research Project Manager – Research Associate, Department of Meteorology and Climatology School of Geology, AUTH
2018 (Sep.) – 2021 (Oct.)	Senior Environmental Expert – Scientific Project Manager, DRAXIS Environmental Technology, Thessaloniki, Greece
2017-2020	Collaborating Academic Staff Member of the Hellenic Open University (HOP)
2013 - 2018	Postdoctoral researcher, Laboratory of Atmospheric Physics (Aristotle University of Thessaloniki), Greece <i>Satellite retrievals of tropospheric formaldehyde columns over Greek urban regions and comparison with in situ instruments. Validation activities of global total O₃ climate data, NO₂ and HCHO vertical columns.</i>
2014 (Jul.)	Visiting Research scientist, Climate Observations KNMI (Royal Netherlands Meteorological Institute), Netherlands <i>Development of an inversion method for deriving emission estimates of formaldehyde with the use of satellite sensors and a photochemical transport model.</i>
2008-2012	Scientific Associate, Laboratory of Atmospheric Physics (Aristotle University of Thessaloniki), Greece <i>Atmospheric Physics and Chemistry of trace gases through satellite remote sensing. Evaluation of regional climate transport model simulations using satellite retrievals. Inversion of NO₂ on regional scale: Identification and assessment of local NO_x emission sources using space-based constraints and model simulations over South Eastern Europe.</i>
2005 (Dec.)-2006 (Jan.)	Stagiaire, DRAXIS Environmental Technology, Thessaloniki, Greece <i>Environmental Impact Assessment Studies and development of a data base with European Environment Agency (EEA) reports</i>
2003 (Oct.)-2003 (Dec.)	Stagiaire, Laboratory of Dimensional Measurements, Hellenic Institute of Metrology, Industrial area of Thessaloniki, Sindos, Greece <i>Instruments calibration with the use of symbolometry</i>

PARTICIPATION IN FUNDED PROJECTS

1. Digital mosquito nuisance prediction application "Mosquito vision", NSRF 2014-2020, Region of Central Macedonia, **2021(Oct) – 2024 (Oct)**.
2. Scientific project manager of "Sympnia - Air quality monitoring and forecasting using satellite and low-cost sensors deriving data", General Secretariat of Research and Development, **T1EDK-05515**.
3. Scientific project manager of "EMISSION - Integrated platform for the more efficient monitoring of air pollution with the use of IoT network", General Secretariat of Research and Development, **T1EDK-00242**.
4. Scientific partner of" AIRTHINGS - Fostering resource efficiency and climate change resilience through community-based Air Quality Internet of Things", **Interreg V-B "Balkan – Mediterranean 2014-2020"**, BMP1/2.2/2169/2017.
5. Scientific project manager of "Operational plan of tackling Air Pollution in Region of Central Macedonia - 002461-1", **2018 (Oct) – 2019 (May)**.
6. Scientific project manager of [Envi4All](#), 2018-2021.
7. Freelance collaborator of "hackAIR - Collective awareness platform for outdoor air pollution", G.A. 688363, **HORIZON 2020 – CAPS EUROPEAN COMMISSION** - Research Executive Agency (REA), **Oct. – Dec. 2018**.
8. Atmospheric Chemistry Monitoring Satellite Application Facility-Third Continuous Development and Operations

- Phase (CDOP-3)", **EUMETSAT, 2017-2022**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
9. Monitoring and Assessment of Regional Air quality in China using Space Observations, Project of Long-term Sino-European Co-Operation [**MARCO POLO**], European Commission, Seventh Framework Program, **2014-2017**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 10. Atmospheric Chemistry Monitoring Satellite Application Facility-Second Continuous Development and Operations Phase (CDOP-2), **EUMETSAT, 2012-2017**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 11. State Scholarship Foundation (IKY), Greece-Germany bilateral cooperation, Operational air quality forecast in Greece and Germany, **2014-2015 (IKYDA 2014)**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher].
 12. **ARISTEIA (AVANTI): Optimization and expansion of ground infrastructure for the validation of satellite-derived column densities of atmospheric species"**, **ESPA, 2014-2015**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 13. Building consolidated climate-relevant ozone data sets in the framework of the ESA's Climate Change Initiative (CCI)", **European Space Agency, 2012-2016**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 14. O3SAF: Satellite Application Facility on Ozone and Atmospheric Chemistry Monitoring", **EUMETSAT, 2007-2016**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [freelance collaborator]
 15. Phaethon: "Building Infrastructure for the validation of satellite derived atmospheric parameters", European Space Agency, 2009 - 2011, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 16. Atmospheric Chemistry Monitoring Satellite Application Facility-Continuous Development and Operations Phase (CDOP)", **EUMETSAT, 2007-2012**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]
 17. GDP 5.0-Upgrade of the GOME Data Processor for Improved Total Ozone Columns", **European Space Agency, 2007-2010**, Laboratory of Atmospheric Physics, Aristotle University of Thessaloniki [researcher]

LANGUAGES

Greek	Mother tongue
English	Proficient User (Cambridge First Certificate in English)

PARTICIPATION IN FIELD CAMPAIGNS

International Aerosol Campaign, Measurements with an EKO sun photometer, Laboratory of Atmospheric Physics, AUTH, Thessaloniki 12-25 July, 2006, **SCOUT-O3 project**

SCIENTIFIC FIELDS / INTERESTS

- **Atmospheric Physics and Chemistry of trace gases** through satellite remote sensing.
- Evaluation of regional **climate transport model simulations** using **satellite retrievals**.
- Validation studies of total **O₃**, **HCHO** and tropospheric **NO₂** columns involving satellite data processing and intercomparison with a variety of ground-based measurements (Brewer, Dobson network from WOUDC, NDACC, MAXDOAS).
- Characteristics of the ozone decline over both hemispheres estimated from multiple satellite sensors. Global long-term monitoring of the **Antarctic Ozone Hole** from satellite instruments and statistical data analysis. Preparation and distribution of the O₃ maps made by the **WMO Northern Hemisphere Daily Ozone Mapping Centre** and operated by the Laboratory of Atmospheric Physics at the Aristotle University of Thessaloniki (Greece) (<http://lap.physics.auth.gr/ozonemaps2/index.php>).
- **Inversion of NO₂** on regional scale. Identification and assessment of local **NO_x emission sources** using space-based constraints and model simulations over South Eastern Europe.
- Air pollution monitoring with **low-cost sensors**
- Air quality **citizen science**

THESIS SUPERVISION

2015-2018

" Methodology of estimation of NO₂ surface concentration through satellite observations of tropospheric NO₂ columns, Fani Alexandri".

TEACHING EXPERIENCE

2008-2014

Assistant Teaching in undergraduate course "Atmospheric Technology, Ozone-sonde Measurements" in the department of Physics, Aristotle University of Thessaloniki

COMPUTER SKILLS AND COMPETENCES

Very good command of **Microsoft Office tools** (Windows, Word, Excel, Powerpoint, Access, Outlook Express, Internet Explorer)

Very good command of **IDL Programming Language**

Very good command of **statistics and plotting tools** (Origin, Grapher, Surfer)

Good command of **ArcGIS**

Good command of **AERMOD software** (Air dispersion model)

PUBLICATIONS

Peer Review Journals

1. Spandonidis, C. Tsantilas, S. Giannopoulos, F. Giordamli, C. **Zyrichidou, I.** Syropoulou, P., Design and Development of a New Cost-Effective Internet of Things Sensor Platform for Air Quality Measurements, Journal of Engineering Science and Technology Review; 13(6):81-91, 2020.
2. **Zyrichidou I.**, D. Balis, N. Liora, et al., Adverse results of the economic crisis: satellites observe enhanced formaldehyde levels over Greece, Atmospheric Research, Vol. 224, p. 42-51, DOI: 10.1016/j.atmosres.2019.03.017, 2019.
3. K. Garane, C. Lerot, M. Coldewey-Egbers, T. Verhoelst, **I. Zyrichidou** et al., Quality assessment of the Ozone_CCI Climate Research Data Package (release 2017): Part 1: Ground-based validation of total ozone column data products, AMT,11, 1385-1402 <https://doi.org/10.5194/amt-11-1385-2018>, 2018.
4. Theano Drosoglou, Maria Elissavet Koukouli, Natalia Kouremeti, Alkiviadis F. Bais, **Irene Zyrichidou** et al., MAX-DOAS NO₂ observations over Guangzhou, China; ground-based and satellite comparisons, AMT, <https://doi.org/10.5194/amt-2017-394>, 2018.
5. Koukouli M.E., N. Theys, J. Ding, I. Zyrichidou, B. Mijling, D. S. Balis and R. J. van der A, Updated SO₂ emission estimates over China using OMI/Aura observations, Atmos. Meas. Tech., 11, 1817-1832, <https://doi.org/10.5194/amt-11-1817-2018>, 2018.
6. Theano Drosoglou, Alkiviadis F. Bais, **Irene Zyrichidou** et al., Comparisons of ground-based tropospheric NO₂ MAX-DOAS measurements to satellite observations with the aid of an air quality model over Thessaloniki area, Greece, Atmospheric Chemistry and Physics, <https://doi.org/10.5194/acp-17-5829-2017>, 17, 5829-5849, 2017.
7. Boynard, A., Hurtmans, D., Koukouli, M.E., Goutail, F., Bureau, J., Safieddine, S., Lerot, C., Hadji-Lazaro, J., Wespes, C., Pommereau, J.-P., Pazmino, A., **Zyrichidou, I.** et al., Seven years of IASI ozone retrievals from FORLI: Validation with independent total column and vertical profile measurements, Atmospheric Measurements Techniques, Vol. 9, Issue 9, 4327-4353, 2016.
8. S. Hassinen, D. Balis, H. Bauer, M. Begoin, A. Delcloo, K. Eleftheratos, S. Gimeno Garcia, J. Granville, M. Grossi, N. Hao, P. Hedelt, F. Hendrick, M. Hess, K.-P. Heue, J. Hovila, H. Helge Jønch-Sørensen, N. Kalakoski, M. Koukouli, J. Kujanpää, J.-C. Lambert, C. Lerot, D. Loyola, A. Määttä, G. Pinardi, F. Romahn, M. van Roozendael, R. Lutz, I. De

- Smedt, P. Stammes, W. Steinbrecht, J. Tamminen, N. Theys, L. G. Tilstra, O. N. E. Tuinder, P. Valks, C. Zerefos, W. Zimmer, and **I. Zyrichidou**, Overview of the O3M SAF GOME-2 operational atmospheric composition and UV radiation data products and data availability, *Atmospheric Measurement Techniques*, Vol. 9, Issue 2, 383-407, 2015.
9. M. Koukouli, C. Lerot, J. Granville, F. Goutail, J.-C. Lambert, J.-P. Pommereau, D. Balis, **I. Zyrichidou**, M. Van Roozendaal, M. Coldewey-Egbers, D. Loyola, G. Labow, S. Frith, R. Spurr and C. Zehner, Evaluating a new homogeneous total ozone climate data record from GOME/ERS-2, SCIAMACHY/Envisat and GOME-2/MetOp-A, *Journal of Geophysical Research*, Vol. 120, Issue 23, 12296-12312, doi: 10.1002/2015JD023699, 2015.
 10. **Zyrichidou I.**, M. E. Koukouli, D. Balis, K. Markakis, I. Kioutsioukis, A. Poupkou, D. Melas, K.F. Boersma & M. van Roozendaal, Identification of surface NO_x emission sources on a regional scale using OMI NO₂, *Atmospheric Environment*, 101, 82-93, 2015.
 11. Eleftheratos, K., Kazadzis, S., Zerefos, C., Tourpali, K., Meleti, C., Balis, D., **Zyrichidou, I.**, Lakkala, K., Feister, U., Koskela, T., Heikkilä, A., Ozone and spectroradiometric UV changes in the past 20 years over high latitudes, *Atmosphere-Ocean, Canadian Meteorological and Oceanographic Society*, DOI:10.1080/07055900.2014.919897, 53, 117-125, 2015.
 12. N. Hao, M.E. Koukouli, A. Inness, P. Valks, D.G. Loyola, W. Zimmer, D.S. Balis, **I. Zyrichidou**, M. Van Roozendaal, C. Lerot, and R.J.D. Spurr, GOME-2 total ozone columns from MetOp-A/MetOp-B and assimilation in the MACC system, submitted to *Atmospheric Measurement Techniques*, 7, 2937-2951, doi:10.5194/amt-7-2937-2014, 2014.
 13. **Zyrichidou I.**, M. E. Koukouli, D. S. Balis, I. Kioutsioukis, A. Poupkou, E. Katragkou, D. Melas, K. F. Boersma, M. van Roozendaal, Evaluation of high resolution simulated and OMI retrieved tropospheric NO₂ column densities over the Balkan region, *Atmospheric Research*, 122, 55-66, <http://dx.doi.org/10.1016/j.atmosres.2012.10.028>, 2013.
 14. I.S.A. Isaksen, C. Zerefos, W.-C. Wang, D. Balis, K. Eleftheratos, B. Rognerud, F. Stordal, T. K. Berntsen, J. H. LaCasce, O.A. Søvde, D. Olivie, Y. Orsolini, **I. Zyrichidou**, M. Prather, O.N.E. Tuinder, Attribution of the Arctic ozone column deficit in March 2011, *Geophysical Research Letters*, vol. 39, L24810, <http://dx.doi.org/10.1029/2012GL053876>, 2012.
 15. Balis D., I.S.A. Isaksen, C. Zerefos, **I. Zyrichidou**, K. Eleftheratos, K. Tourpali, R. Bojkov, B. Rognerud, Observed and Modeled record ozone decline over the Arctic during winter/spring 2011, *Geophysical Research Letters*, VOL. 38, L23801, <http://dx.doi.org/10.1029/2011GL049259>, 2011.
 16. **Zyrichidou I.**, Koukouli M. E., Balis D. S., Katragkou E., Melas D., Poupkou A., Kioutsioukis I., van der A R., Boersma F. K., van Roozendaal M. and Richter A.: Satellite NO₂ observations and model simulations of tropospheric columns over South-eastern Europe, *Atmospheric Chemistry and Physics*, 9, Issue 16, 6119-6134, <http://dx.doi.org/10.5194/acp-9-6119-2009>, 2009.

Conference Proceedings

1. **Zyrichidou**, D. Balis, N. Liora et al., Investigating the impact of the economic recession over Mediterranean urban regions on satellite-based formaldehyde columns; comparison with chemistry transport model results, in book: *Perspectives on Atmospheric Sciences*, pp.1027-1033, online ISBN: 978-3-319-35095-0, Springer International Publishing, XIII EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, September 19-21, Thessaloniki, Greece, http://dx.doi.org/10.1007/978-3-319-35095-0_147, 2017.
2. Koukouli, M. E., Theys, N., Ding, J., **Zyrichidou, I.**, Balis, D. S., and van der A, R., Top-down SO₂ emissions over China; a satellite approach, in book: *Perspectives on Atmospheric Sciences*, pp.1015-1020, online ISBN: 978-3-319-35095-0, Springer International Publishing, XIII EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, September 19-21, Thessaloniki, Greece, http://dx.doi.org/10.1007/978-3-319-35095-0_145, 2017.
3. Drosoglou Th., Bais A.F., **Zyrichidou I.** et al., Comparison of ground-based tropospheric NO₂ columns with OMI/Aura products in the greater area of Thessaloniki by means of air quality modeling tool, in book: *Perspectives on Atmospheric Sciences*, pp.1075-1080, online ISBN: 978-3-319-35095-0, Springer International Publishing, XIII EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics,

September 19-21, Thessaloniki, Greece, http://dx.doi.org/10.1007/978-3-319-35095-0_153, 2017.

4. M. E. Koukouli, D. S. Balis, **I. Zyrichidou**, et al., Area sulphur dioxide emissions over China extracted from GOME2/MetopA observations, in Proceedings of the European Space Agency Living Planet Symposium, ESA Special publication 740, 9-13 May, Prague, Czech Republic, 2016.
5. Koukouli, M. E., **Zyrichidou, I.**, Balis, D. S., Hao, N, Valks, P, Loyola, D., Theys, N., van Roozendael, M., for the O3MSaf Team, Global total ozone and sulphur dioxide columns validation as part of the EUMETSAT Satellite Application Facility on Ozone and Atmospheric Chemistry Monitoring, in E-Proceedings of the XII EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, Vol 2, http://comecap2014.chemistry.uoc.gr/COMECAP-ISBN-978-960-524-430-9-vol_2.pdf, ISBN-978-960-524-430-9, May 28-31, Heraklion, Greece, 2014.
6. Koukouli, M. E., **Zyrichidou, I.**, Balis, D. S., C. Lerot, M. Van Roozendael, D. Loyola, M. Coldewey-Egbers and C. Zehner, Validation of an improved European long-term multi-sensor global total ozone record as part of the ESA Climate Change Initiative, in E-Proceedings of the XII EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, Vol 2, ISBN-978-960-524-430-9, May 28-31, Heraklion, Greece, http://comecap2014.chemistry.uoc.gr/COMECAP-ISBN-978-960-524-430-9-vol_2.pdf, 2014.
7. **Zyrichidou I.**, Koukouli M.E., Balis D., Markakis K., Kioutsioukis I., Poupkou A., Melas D., Boersma K.F., van Roozendael M., Compilation of a NO_x emission inventory for the Balkan region using satellite tropospheric NO₂ columns, COMECAP 2012, 11th International Conference on Meteorology, Climatology and Atmospheric Physics, 30 May – 1 June 2012, Springer Atmospheric Sciences, Advances in Meteorology, Climatology and Atmospheric Physics, P.1265 – 1272, ISBN: 978-3-642-29171-5 (Print) 978-3-642-29172-2 (Online), ISSN 2194 – 5217, DOI: 10.1007/978-3-642-29172-2.
8. Koukouli M.E., Valks P., Poupkou A., **Zyrichidou I.**, Rix M., Hao N., Katragkou E., Balis D.S., Loyola D., Melas D., Investigating the GOME2/MetopA total sulphur dioxide load with the aid of chemical transport modeling over the Balkan region, 11th International Conference on Meteorology, Climatology and Atmospheric Physics, 30 May – 1 June 2012, Springer Atmospheric Sciences, Advances in Meteorology, Climatology and Atmospheric Physics, P.1075 – 1080, ISBN: 978-3-642-29171-5 (Print) 978-3-642-29172-2 (Online), ISSN 2194 – 5217, DOI: 10.1007/978-3-642-29172-2.
9. Kouremeti N., Bais A., Balis D., **Zyrichidou I.**, Phaethon: A system for the validation of satellite derived atmospheric columns of trace gases, 11th International Conference on Meteorology, Climatology and Atmospheric Physics, 30 May – 1 June 2012, Springer Atmospheric Sciences, Advances in Meteorology, Climatology and Atmospheric Physics, P.1081 – 1088, ISBN: 978-3-642-29171-5 (Print) 978-3-642-29172-2 (Online), ISSN 2194 – 5217, DOI: 10.1007/978-3-642-29172-2.
10. **I. Zyrichidou**, D.S. Balis, K. Tourpali, et al., Characteristics of the ozone decline estimated from multiple satellite sensors, in Proceedings of the X EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, pp 616-626, May 25-28, Patras, Greece, 2010.
11. **I. Zyrichidou**, D. Balis , K. Tourpali, M.E. Koukouli, R. Bojkov, R. van der A, D.G. Loyola, Global total ozone characteristics estimated from individual satellite sensors and merged data sets, EUMETSAT Meteorological Satellite Conference, Cordoba, Spain , 20-24 September, 2010, P.57, ISBN 978-92-9110-089-7, ISSN 1011-3932.
12. **I. Zyrichidou**, M.E. Koukouli, D.S. Balis, E. Katragkou, A. Poupkou, I. Kioutsioukis, K. Markakis, D. Melas, R. van der A, F. K. Boersma and M. van Roozendael, Comparison of Satellite NO₂ Observations with High Resolution Model Simulations over the Balkan Peninsula , 7th BPU General Conference, Alexandroupolis, Greece, 9-13 September 2009, American Institute of Physics Conference proceedings Volume 1203, Published December 2009, ISBN 978-0-7354-0740-4, pp. 632-637, doi:10.1063/1.3322525, Issue Date: 21 January 2010.
13. **I. Zyrichidou**, Koukouli M. E., Balis D. S., Katragkou E. Poupkou A., Kioutsioukis I., Melas D., van der A R., Dirksen R., van Roozendael M. and Richter A., Satellite observations of tropospheric NO₂ columns over South Eastern Europe, EUMETSAT Meteorological Satellite Conference, 8-12 September 2008, EUMETSAT P.52, ISBN 978-92-9110-082-8, ISSN 1011-3932.
14. **I. Zyrichidou**, Koukouli M. E., Balis D., van der A R., Dirksen R. and van Roozendael M., Analysis of the Nitrogen Dioxide Tropospheric Column over the Balkan peninsula using satellite measurements, IX EMTE National-International Conference of Meteorology-Climatology and Atmospheric Physics, Thessaloniki, Greece, 28-31 May 2008, ISBN 978-960-98291-0-6, 829-836.

Other Publications

1. D. Balis, M. E. Koukouli, **I. Zyrichidou**, Product Validation and Intercomparison Report (PVIR), Ozone CCI, 2014 (<http://www.esa-ozone-cci.org/?q=documents#>).
2. D. Balis, M. E. Koukouli, **I. Zyrichidou**, P. Valks, N. Hao, O3M SAF Validation report ON gome-2 GDP 4.7, UPAS version 1.3.9 Near Real Time Total Ozone/ Offline Total ozone, 2013 (<http://www.esa-ozone-cci.org/?q=documents#>).
3. N. Kouremeti, A. Bais, D. Balis, **I. Zyrichidou**, M. van Roozendaal, C. Fayt, G. Pinardi, D. Loyola, PHAETHON: Building Infrastructure for the validation of satellite derived atmospheric parameters Development of “Phaethon” system, Final Report, 2011.

THESES/MONOGRAPHS

1. **I. Zyrichidou**, Satellite remote sensing of atmospheric species, Ph.D. thesis, University of Thessaloniki, Physics Department, (2013)
2. **I. Zyrichidou**, Comparative study of the air pollution levels over European cities, Master degree thesis, University of Thessaloniki, Physics Department, (2006)
3. **I. Zyrichidou**, The impact of wind on the air pollution levels in the sinks of Amintaio – Ptolemaida – Kozani, Bachelor degree thesis, University of Thessaloniki, Physics Department, (2004)

ORAL AND POSTER PRESENTATIONS IN CONFERENCES

1. **Zyrichidou, I.**, Solomos, S., Kotsopoulos, S., Syropoulou, P., and Kosmidis, E.: Development of a high-resolution air quality forecasting system, based on WRF-Chem model, for the greater area of Thessaloniki, Greece, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-21296, <https://doi.org/10.5194/egusphere-egu2020-21296>, 2020.
2. **Zyrichidou, I.**, Syropoulou, P., Akritidou M. et al., Deployment of cost-effective sensors for air quality monitoring by citizens in the region of Thessaloniki, 12th International Conference on Air Quality Science and Application, Thessaloniki, 2020.
3. **Zyrichidou, I.**, Syropoulou, P., Tekes S. et al., City-wide air quality measurement system based on IoT network, 12th International Conference on Air Quality Science and Application, Thessaloniki 2020.
4. Syropoulou P., Kosmidis E., **Zyrichidou I.**, Developing a personalized air quality index for the better understanding of air pollution impacts on health and wellbeing, 12th International Conference on Air Quality Science and Application, Thessaloniki, 2020.
5. **I. Zyrichidou**, D. Balis, K. Tourpali, K. Eleftheratos, C. Zerefos, R. van der A, Monitoring of long-term total ozone characteristics from space at the Northern polar and middle latitudes for the winter-spring period 1979-2018, 14th International Conference on Meteorology, Climatology and Atmospheric Physics October 15-17, Alexandroupolis, Greece, 2018.
6. D. Balis, M. Koukouli, K. Garane, A. Bais, **I. Zyrichidou** et al., Initial validation of TROPOMI total ozone column, 14th International Conference on Meteorology, Climatology and Atmospheric Physics October 15-17, Alexandroupolis, Greece, 2018.
7. F. Alexandri, **I. Zyrichidou**, D. Balis, A. Poupkou, D. Melas, Inference of surface nitrogen dioxide concentrations from Ozone Monitoring Instrument (OMI) tropospheric NO₂ column observations over South-Eastern Europe, 14th International Conference on Meteorology, Climatology and Atmospheric Physics October 15-17, Alexandroupolis, Greece, 2018.
8. G. Alexandri, Georgoulas A. K., **Zyrichidou I.**, Balis D., Kourtidis K., The effect of NO₂ on surface solar radiation over urban areas in Greece, 14th International Conference on Meteorology, Climatology and Atmospheric Physics October 15-17, Alexandroupolis, Greece, 2018.
9. **I. Zyrichidou**, D. Balis, M.E. Koukouli, T. Drosoglou, A. Bais, M. Gratsea2, E. Gerasopoulos, I. De Smedt, M. Van

- Roozendael, R. Van der A, K.F. Boersma and A. Richter, Inter-annual variations of nitrogen dioxide and formaldehyde over Greek urban sites detected from space, EUMETSAT Meteorological Satellite Conference, Rome, Greece, 02-06 October 2017.
10. D. S. Balis, M. E. Koukouli, N. Theys, J. Ding, **I. Zyrichidou**, B. Mijling and R. van der A, Updated SO₂ emission estimates over China using OMI/Aura observations and the CHIMERE CTM, AGU FALL MEETING, 12-16 December, San Francisco, 2016.
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 Atmospheric Chemistry and Physics
 Atmospheric Environment
 Atmospheric Pollution Research
 Atmospheric Research
 International Journal of Remote Sensing
 Remote Sensing Letters

MEMBERSHIP IN SCIENTIFIC SOCIETIES

Member of the Greek Physicists Union
 Member of the European Geosciences Union-EGU

SCHOLARSHIPS/AWARDS/FELLOWSHIPS

- 2014 **Young Scientist Travel Award**, EUMETSAT Meteorological Satellite Conference 2014, Geneva, Switzerland (22-27 September 2014)
- 2015 Aristotle University Research Committee **Scholarship of Excellence** "Emission estimates of formaldehyde with the use of satellite sensors and a photochemical transport model"