

15th

INTERNATIONAL CONFERENCE
on Meteorology, Climatology
and Atmospheric Physics

COMECAP 2021 www.comecap2021.gr
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Hybrid Congress

SEPTEMBER
26th - 29th, 2021

Hotel Du Lac,
Ioannina, Greece

Sunday, September 26th 2021

18.00	<i>Welcome Reception</i>
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Monday, September 27th 2021

09.00-10.30	ORAL SESSION Atmospheric Physics Chairpersons: TBA
09.00-09.15	Aerosol optical depth retrieval from ground-based surface solar radiation measurements using machine learning techniques Logothetis S.A., Salamalikis V., Kazantzidis A.
09.15-09.30	Validation of TROPOMI/S5P total ozone using ground based DOAS measurements in Thessaloniki, Greece Gkertsis F., ABais F., Koukouli M.E., Garane K., Balis D., Roozendaal M.V., Clerot .
09.30-09.45	Spatial and temporal relationships between total flash rates and radar reflectivity volumes under convection Roupa P., Avgoustoglou E. and Karacostas Th.
09.45-10.00	On the impact of sound on atmospheric particulates Kourtidis K., Andrikopoulou A.
10.00-10.15	The nextSENSE system: Short-term forecasting of solar energy in Europe and North Africa Kosmopoulos P.G., Kazantzidis S., Kouroutsidis D., Papachristopoulou K., Saint-Drenan Y.M., Kontoes C. and Blanc P.
10.15-10.30	Climatology and trends of Aerosol Optical Properties and Direct Radiative Effect of main aerosol types based on MERRA-2 reanalysis data Korras-Carraca M.B., Gkikas A., Matsoukas C. and Hatzianastassiou N.
10.30-11.00	<i>Coffee break</i>
11.00-12.00	OPENING CEREMONY
12.00-13.00	Chairpersons: TBA Invited Lecture Vincenzo Levizzani
13.00-14.30	<i>Lunch break</i>

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14.30-16.30	ORAL SESSION PANACEA Chairpersons: TBA
14.30-14.45	Variation of CCN and potential CDNC in the eastern Mediterranean Neroladaki A., Stavroulas I., Tsiodra I., Kalivitis N., Myriokefalitakis S., Bougiatioti A., Mihalopoulos N., Nenes A. and Kanakidou M.
14.45-15.00	Vertical profiling of the electrical properties of charged desert dust during the pre-ASKOS campaign Daskalopoulou V., Hloupis G., Mallios S. A., Makrakis I., Skoubris E., Kezoudi M., Ulanowski Z., Amiridis V.
15.00-15.15	Case study analysis of aerosol shortwave radiative effect over Athens, using the FORTH radiative transfer model, multi-wavelength Raman-lidar measurements and satellite observations Stathopoulos V.K., Soupiona O., Korras-Carraca M.B., Samaras S., Papayannis A., Mylonaki M., Papanikolaou C.A., Foskinis R., Hatzianastassiou N. 3, Vardavas I. and Matsoukas C.
15.15-15.30	Optical and microphysical properties of stratospheric smoke aerosols: on the possibility to enhance AERONET retrievals of UTLS smoke Gialitaki A., Tsekeri A., Amiridis V., Marinou E., Kampouri A., Tsihla M., Tsikoudi I. and Balis D.
15.30-15.45	Assessment of PANDORA total O3 and total NO2 retrievals in Athens, Greece Raptis I.-P., Eleftheratos K., Kopania T., Kouklaki D., Kazadzis S.
15.45-16.00	Vertical profiling of aerosol particles over the city of Ioannina (Greece) during the winter period 2020 Papayannis A., Papanikolaou C.A., Foskinis R., Mylonaki M., Soupiona O.
16.00-16.15	First validation of AEOLUS L2A products over PANACEA sites Gkikas A., Gialitaki A., Binietoglou, Proestakis E.1, Paschou P., Siomos N., Kampouri A., Solomos S., Kosmopoulos P., Marinou E., Voudouri K.A., Papanikolaou C., Mylonaki M., Balis D., Papayannis A. and Amiridis V.
16.15-16.30	Updated power plant NOx emissions in Greece from LOTOS-EUROS model simulations and Sentinel-5P/TROPOMI observations Skoulidou I., Koukouli M.E., Segers A., Manders A., Stavrakou T., Balis D., Jos van Geffen and Eskes H.
16.30-18.00	Poster Session for Atmospheric Physics, PANACEA, Numerical modeling and forecasting(see details below) / Coffee break
18.00-19.30	ORAL SESSION Numerical modeling and forecasting Chairpersons: TBA
18.00-18.15	Evaluating high resolution numerical weather predictions using spatial verification methods Tegoulas I., Pytharoulis I., Zanis P. and Karacostas T.

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18.15-18.30	Optimization technique on an NWP high resolution model Voudouri A., Carmona I., Avgoustoglou E. and Levi Y.
18.30-18.45	Early Warning of Epidemic Spread: lessons learned from an unprecedented effort Angelou A., Kioutsoukis I., Stilianakis N. I.
18.45-19.00	An advanced scheme for nowcasting precipitation and its sensitivity to the assimilated remote sensing estimations Pappa A., Spyrou C., Anagnostou M., Varlas G., Papadopoulos A. and Katsafados P.
19.00-19.15	Forecast Icing Potential during a low-pressure system passage over Greece Louka P., Samos I. and Gofa F.
19.15-19.30	IRIS: Rapid response fire spread forecasting system – Operational implementation and evaluation during the 2019 fire season Giannaros T. M., Kotroni V. and Lagouvardos K.

Poster Session for Atmospheric Physics, PANACEA, Numerical modeling and forecasting

Atmospheric Physics

ERATOSTHENES Centre of Excellence: The importance of Atmospheric Physics in Remote Sensing in the EMMENA region

Mamouri R.E., Nisantzi A., Ansmann A., Bühl J., Seifert P., Engelman R., Baars H., Michaelides S. and Hadjimitsis D.G.

Air quality and cloud effects on surface solar radiation over urban and rural areas in Greece

Alexandri G., Georgoulas A. K., Balis D.

Validation and bias-adjustment of CAMS surface solar irradiance against ground-based measurements

Salamalikis V., Tzoumanikas P., Argiriou A. A. and Kazantzidis A.

Wind and planetary boundary layer observations during the Pre-TECT campaign

Tsikoudi I., Marinou E., Gialitaki A., Tschla M., Amiridis V., Tombrou M., Giannakaki E., Komppula M., Vakkari V. and Flocas H.

Detecting causality between aerosols, water vapor and clouds

Stathopoulos S., Tsonis A.A., Kourtidis K.

Aerosol Typing and Characterization During Pre-Tect campaign over Finokalia, Crete

Voudouri K. A., Marinou E., Gialitaki A., Tschla M., Kampouri A., Amiridis V., Baars H., Yin Z., and Meleti C.

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Dust aerosols in the Greek area and their effect on surface solar irradiance

Papachristopoulou K., Kosmopoulos P. , Gkikas A., Amiridis V., Hatzaki M. and Kazadzis S.

Cloud detection methodology based on RGB images captured by a low-cost ground based all-sky camera

Karagkiozidis D., Natsis A. and Bais A.

Global trends of Dust Optical Depth, over the period 2003-2017, based on the MIDAS fine resolution dataset

Logothetis S.A., Salamalikis V., Gkikas A., Kazadzis S., Amiridis V. and Kazantzidis A.

Analysis the stable isotopes ($d^{18}O$ and d^2H) in the precipitation (rain, hail, snow) of Patras from 2000 to 2016

Argiriou A.A., Avgerinos E., Geraga M.

Analysis of the seasonal air mass transport pathways and Potential Source regions of PM₁₀ at a coastal site in the Eastern Mediterranean

Rizos K., Meleti C., Kouvarakis G., Mihalopoulos N., Kanakidou M., Melas D.

Long-term MAX-DOAS NO₂ measurements over Athens and association with urban sources

Gratsea M., Athanasopoulou E., Kakouri A. , Richter A. , Seyler A. and Gerasopoulos E.

The evaluation of the atmospheric refraction index using COSMO Model and its comparison with radio-soundings over Greece

Zlatkos Anestis, Avgoustoglou Euripides

The convective day category index and related synoptic, radar and hail parameters

Vlachou M., Stolaki S. and Sioutas M.

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PANACEA

Personal dose and health risk indexes of particulate matter (PM₁₀) in several Greek cities

Eleftheria Chalvatzaki, Sofia Eirini Chatoutsidou, Ilias Kopanakis, Dimitris Melas, Daphne Parliari, Nikos Mihalopoulos, and Mihalis Lazaridis

Pollutants dispersion from domestic wood burning for heating at Ioannina

Solomos S., Kampouri A., Amiridis V., Balis D., Bais A., Karagiannidis D., Papayannis A., Mihalopoulos N., Bougiatioti A., Stavroulos I., Liakakou E., Gerasopoulos E., Athanasopoulou E., Poupkou A., Zerefos C., Mylonaki M., Soupiona O., Papanikolaou C., Foskinis R., Kakouri A., D. Karagiannis

Observations of alkylamines in the East Mediterranean atmosphere

Tzitzikalaki E., Kalivitis N., Panagiotopoulou G., Kanakidou M.

Global simulations of Ice Nuclei and Cloud Condensation Nuclei Particles derived from insoluble mineral Dust

Chatziparaschos, M., Daskalakis, N. Myriokefalitakis, S., and Kanakidou, M.

Interannual and seasonal variability of greenhouse gases at Finokalia station in the East Mediterranean

N. Gialesakis, G. Kouvarakis, N. Kalivitis, M. Ramonet, N. Mihalopoulos, M. Delmotte, C. Lett, V. Legendre, M. Kanakidou

C10 – C16 Volatile Organic Compounds in Athens (Greece)

Anastasia Panopoulou, Eleni Liakakou, Stéphane Sauvage, Valérie Gros, Nadine Locoge, Bernard Bonsang, Evangelos Gerasopoulos, Nikolaos Mihalopoulos

Aerodynamic effects on dust transport processes

Eleni Drakaki, Vassilis Amiridis, Sotirios Mallios, Stavros Solomos, Christos Spyrou, Alexandra Tsekeri, Antonis Gkikas, Demetri Bouris, Petros Katsafados

Measurements of the atmospheric electric field, PM_{2.5} and meteorological parameters in Xanthi

Kourtidis K., Karagioras A. and Stavroulos I.

Retrieval of vertically-resolved aerosol optical and microphysical properties using Thessaloniki lidar measurements during 2019 summer PANACEA campaign

K. Michailidis, N. Siomos, K.A. Voudouri, A. Ansmann, A. Chaikovsky and D. Balis

Overview of the 2019-2020 winter PANACEA campaign at Ioannina, Greece

Gavrouzou M., Korras-Carraca M.B., Liakakou E., Grivas G., Bougiatioti A., Stavroulos I., Michailidis K., Karagkiozidis D., Papanikolaou C.-A., Foskinis R., Mylonaki M., Soupiona O., Koukouli M., Hatzianastasiou N., Balis D., Bais A.F., Papayannis A., Gerasopoulos E., Mihalopoulos N.

Monitoring of tropospheric NO₂, HCHO and aerosols using MAX-DOAS observations for the first time in Ioannina Greece during the PANACEA winter campaign 2020

D. Karagkiozidis, A. F. Bais, N. Hatzianastasiou, M. Gavrouzou, M. E. Koukouli, C. Papanikolaou, S. Kontos, D. Balis and A. Papayannis

The potential of a synergistic lidar and sunphotometer retrieval for the characterization of dust events during PRE-TECT campaign over Finokalia, Greece

Konsta D., Tsekeri A., Lopatin A., Goloub P., Dubovik O., Amiridis V. and Nastos P.
Air quality over Thessaloniki Greece revealed by a PANACEA summer and winter observational campaign; an overview

Koukouli, M.E., Karagkiozidis, D., Michailidis, K., Siomos, N., Voudouri, K. A., Mermigkas, M., Topaloglou, C., Skoulidou, I., Chatzopoulou, A., Symeonidis, P., Christelis, E., Balis, D. S. and Bais A.

Long Term Variability of the Aerosol Intensive Properties over Thessaloniki

P. Fountoukidis, C. Biskas, K. A. Voudouri, N. Siomos and D. Balis

Synergy of Remote Sensing Techniques for Aerosol Typing over Thessaloniki

K. A. Voudouri, N. Siomos, K. Michailidis, I. Fountoulakis, A. Natsis, A. Karanikolas, K. Garane, A. Bais, D. Balis

Evaluation of the LOTOS-EUROS NO₂ simulations using ground-based measurements and S5P/TROPOMI observations over Greece

Skoulidou I., Koukouli M.E., Manders A., Segers A., Karagkiozidis D., Gratsea M., Balis D., Bais A., Gerasopoulos E., Richter A., Stavrakou T., van Geffen J. and Eskes H.

Monitoring dust particle orientation with measurements of sunlight dichroic extinction

Daskalopoulou V., Raptis I.P., Tsekeri A., Amiridis V., Kazadzis S., Ulanowski Z., Metallinos S., Tassis K., and Martin W.

First demonstration of a CALIPSO-based fine-mode and coarse-mode pure-dust product

Proestakis E., Gkikas A., Alexiou A., Marinou E., Georgiou A. and Amiridis V.

Satellite EO of Saharan dust mass transport towards the estimation of dust deposition fluxes along the open Atlantic Ocean

Proestakis E., Gkikas A., Benedetti A., Alexiou A., Georgiou A., Marinou E., and Amiridis V.

Numerical Modeling and Forecasting

Validation of Aeronautical Weather Forecasts of Wind, Direction and Speed issued by the Regional Meteorological Centre «Macedonia»

Stogioudis S., Sarras C., Brikas D.

A 4D-Var radar data assimilation scheme for nowcasting of local extreme weather

Papangelis G., Kalogiros J., Katsanos D. and Retalis A.

Physical and dynamical considerations of three-way atmosphere-wave-ocean coupling

Varlas G., Vervatis V., Spyrou C., Papadopoulou E., Papadopoulos A., and Katsafados P.

Assessment of continental weather forecasts in the framework of AfriCultuReS project

Kartsios S., Pytharoulis I., Karacostas Th. and Katragkou E.

Improving dust forecasts through assimilation of ESA-Aeolus wind profiles

Gkikas A., Papangelis G., Drakaki E., Proestakis E., Spyrou C., Gialitaki A., Marinou E., Benedetti A., Rennie M., Straume A.G., Christoudias T., Kushta J., Sciare J. and Amiridis V.

Subseasonal prediction assessment of an abnormal warm period in Greece

Mitropoulos D., Pytharoulis I., Zanis P. and Anagnostopoulou C.

Validation of WRF high resolution climatic simulation of temperatures over Greece

Politi N., Markantonis I., Karozis S., Sfetsos A., Nastos P. and Vlachogiannis D.

Assessing two-way air-sea coupling in a deep Mediterranean cyclone

Papadopoulou E., Spyrou C., Varlas G., Vervatis V., Papadopoulos A., and Katsafados P.

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Data assimilation of surface and satellite observations into the numerical weather prediction model WRF: an intense precipitation case study in Greece.

Vourlioti P., Kotsopoulos S. , Mamouka Th. and Agraphiotis A.

Turbulence self-organization in a simplified model of a stratified atmosphere and the accurate representation of its dynamics by a generalized quasi-linear model

Bakas N.

Three-dimensional Holmboe instability

Stougiannos A. and Bakas N.

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Tuesday, September 28th 2021

09.00-10.30	ORAL SESSION Climatology Chairpersons: TBA
09.00-09.15	Seasonal variability of heavy-severe aircraft turbulence over Europe for the period 2008-2018 Gerogiannis V. T., Feidas H
09.15-09.30	Climatology and Trends of Global Single Scattering Albedo based on Ozone Monitor System (OMI) Ultraviolet retrievals Drakousis P., Korras-Carraca M. B. , Jethva H., Torres O. and Hatzianastassiou N.
09.30-09.45	TIN-Copula bias correction of climate modeled daily maximum temperature in the MENA region Lazoglou G., Zittis G., Hadjinicolaou P., Lelieveld J.
09.45-10.00	An objective definition of seasons for the Mediterranean region based on the long term mean intra-annual variations of meteorological parameters Kotsias G., Lolis C.J., Hatzianastassiou N., Lionello P., Bartzokas A.
10.00-10.15	Reconstructed climate variability over the Late Glacial and Holocene in a southern Greece environment from a high-temporal resolution pollen record Hatzaki M., Kouli K., Triantaphyllou M., Dimiza M., Gogou A., Panagiotopoulos I.P and Karagerogis A.P.
10.15-10.30	A climatological assessment of desert dust aerosols using MODIS C6.1 and OMI-OMAERUV satellite data Gavrouzou M., Hatzianastassiou N., Gkikas A. , Mihalopoulos N.
10.30-11.30	Poster Session for Climatology, Applied Meteorology (see details below) / Coffee Break
11.30-13.30	ORAL SESSION Weather analysis and extremes Chairpersons: TBA
11.30-11.45	The deep depression that caused severe weather events in Greece at the end of September 2018 Lamaris C., Papakrivou A., Gerogiannis V.T., Skrimizeas P.
11.45-12.00	Study of cloud convection during the Mediterranean tropical-like cyclone case of September 2018 Kolios S. and Kalimeris A.
12.00-12.15	The July 10, 2019 Catastrophic Supercell over Northern Greece. Part I: Observational Analyses Christodoulou M. , Pytharoulis I., Karacostas T.
12.15-12.30	The severe weather outbreak in northern Greece on 10 July 2019: Atmospheric environment and storm characteristics Sioutas M., Chatzi H. and Tegoulas I.

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12.30-12.45	Impact of different heat waves definitions on their long-term statistics Founda D., Katavoutas G. and Pierros F.
12.45-13.00	A study on the sea breeze characteristics at the coasts of epirus, NW greece Doule G.T., Fotiadi A.K., Chaskos D.C., Sindosi O.A., Bartzokas A.
13.00-13.15	An investigation of the different scale atmospheric circulation features contribution upon the 2019 warm dry October – wet November in South Europe and mainly in Greece Prezerakos N.G. and Dafis S.
13.15-13.30	Meteorological dynamics associated with emission and transport of dust from the Thar Desert Dumka U.C., Kaskaoutis D.G., Francis D., Chaboureau J.-P., Rashki A., Liakakou E.
13.30-15.00	Lunch Break
15.00-17.00	ORAL SESSION Applied Meteorology Chairpersons: TBA
15.00-15.15	A new method for the recognition and study of tropical-like cyclones over Mediterranean Douvis K., Polychroni I. and Nastos P.
15.15-15.30	The role of thermal criteria on the performance of the Mediterranean Frontal Tracking Scheme Bitsa E., Flocas H., Kouroutzoglou J., Galanis G., Hatzaki M., Rudeva I. and Simmonds I.
15.30-15.45	Freshwater wetting/drying shifts driven by warming and human water use for food and energy supply Destouni G.
15.45-16.00	Urban green against built environment in terms of human thermal sensation in Athens, Greece Nastos P.T., Polychroni I.D., Charalampopoulos I., Varvaringou A. and Tsiros I.
16.00-16.15	Investigating the Relationship Between Wind Gusts and Lightning Activity at a Wind Energy Power Plant in a Hilly Region of Western Greece Kolokythas K.V., Argiriou A.A., Kotroni V.
16.15-16.30	Measuring and predicting heat stress conditions with the WBGT index Gofa F., Nikas D., Skrimizeas P., Gourzoulidis G. and Flouris A.
16.30-16.45	A system for the assessment and mapping of vulnerability and risk related to high impact weather events in Greece: Yantas project Kotroni V., K. Papagiannaki, Y. Totos, P. Symeonidis, A. Bezes, A. Dinopoulou, Karagiannidis Ath. Kroustallis, E., Lagouvardos K., Messini I., Pahoula M., Vafeiadis V., Vakkas T.

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16.45-17.00	Atmospheric Temperature anomalies as manifestation of the dark Universe Zioutas K., Anastassopoulos V. , Argiriou A., Cantatore G. , Cetin S., Fischer H., Gardikiotis A., Haralambous H., Hoffmann D.H.H., Hofmann S., Karuza M., Kryemadhi A., Maroudas M., Mastronikolis A., Oikonomou C., Ozbozduman K., Semertzidis Y.K
17:00-18:00	Poster Session for Weather Analysis and Extremes, Remote Sensing (see details below)/ Coffee break
18.00-19.30	ORAL SESSION Remote Sensing Chairpersons: TBA
18.00-18.15	Contrail detection on SEVIRI images and one-year study of the physical properties of contrails and the atmospheric conditions favoring their formation over Europe Dekoutsidis G. and Feidas H.
18.15-18.30	Geometrical and microphysical properties of clouds above Eastern Mediterranean during Pre-TECT Marinou E., Voudouri K. A., Tsikoudi I., Rosoldi, M., Ene D. and Meleti C.
18.30-18.45	Study of aerosol layer height product by synergistic use of passive satellite instruments with EARLINET lidar data: Cases studies in Mediterranean Basin Michailidis K. , Siomos N., Koukouli M. E., Voudouri K. A, Veef kind, J. P., de Graaf, M. , Tuinder O. , Tilstra L. G. , Wang P. , Balis D.
18.45-19.00	Rainfall Estimation Using Microwave Links from Cellular Communication Networks in Lebanon Daher A., Al Sakka H.
19.00-19.15	Sentinel-5P/TROPOMI views abrupt changes in nitrogen dioxide levels over Greece after the outbreak of COVID-19 Koukouli M.E., Skoulidou I., Karavias A., Parcharidis I., Balis D., Manders A., Segers A., Van Geffen J. and Eskes H.
19.15-19.30	Detection of NO2 plumes from individual ships over the Mediterranean Sea with the TROPOMI/S5P Georgoulas A. K. , Folkert Boersma K., Jasper van Vliet , Xium ei Zhang , Ronald van der A., Zanis P., Jos de Laat
19.30	HNMS MEETING

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Poster Session for Climatology, Applied Meteorology

Climatology

On the atmospheric circulation characteristics associated with extreme precipitation in the Iberian Peninsula

Lolis C.J., Kotsias G., Ramos A.M., Trigo R.M.

TIN-Copula method: A new statistical method for the bias correction of extreme climate events.

Lazoglou G. , Anagnostopoulou C. , Gräler B. , Tolika K. , Kolyva-Machera F.

A weather type classification for northwestern Greece

D.C. Chaskos, C.J. Lolis, V. Kotroni and A. Bartzokas

Analysis of parallel measurements of daily maximum and minimum temperatures in Greece

Argiriou A., Ioannidis P. and Mamara A.

Investigation and validation of climate data timeseries as derived by ERA5 and ERA20c models and local observations for Kotli, Kastoria, Greece.

Natsis A. and Bais A.

Study of trends and fluctuations of mean air temperature at the surface and in the lower troposphere in the wider region of Greece for the period 1965-2020

Philandra S.C., Ntagkounakis G.E., Kalabokas P., Philandras C. M., Zerefos C.

A spatio-temporal study on hail in Central Macedonia, Greece

Dinopoulou E.V. , Bartzokas A. and Sioutas M.

Observed and projected changes in energy demands at Mediterranean cities

Kaza I., Founda D. , Giannakopoulos C. and Kolokotsa D.

On dew point climatology over Greece

Kalamaras N., Tzanis C.G., Philippopoulos K., Koutsogiannis G. and Alimissis A.

Impact of effective radii communication between microphysics and radiation schemes

Pavlidis V., Katragkou E. , Zanis P. , Karacostas T.

Heating Degree-Days Climatology over Greece at the Service of Government

Granting Heating Subsidy and Energetic Optimization of Building Insulation

Mamara A., Anadranistakis M., Charalambopoulos Ch., Samos J.

Evaluation of Incoming Solar Radiation at titled surfaces at various European Cities

Moustaka A., Raptis I.P., Giannakaki E., Kazadzis S.

A global climatology of tropopause folds in CAMS Reanalysis

Akritidis D., Pozzer A., Flemming J., Inness A. and Zanis P.

Applied Meteorology

Winds, Waves and Sea Surface Chlorophyll Concentrations

Kotta D., Kitsiou D. and Kassomenos P.

In-flight rerouting in adverse convective weather conditions

Lekas Th., Louka P., Pytharoulis I. and Kallos G.

F- Index, a new fire weather index, well promising for Greece

Daniilidis A., Gouvas M., Papadopoulos A.

Meteorological parameters that influence the environmental risk of a marine accident with oil pollutants in the Aegean

Giannousopoulou M., Konstandinidou M.

Electrical Properties of Transported Dust Layers due to Atmospheric Ion Attachment to Dust Particles

Mallios S.A., Papangelis G., Hloupis G., Papaioannou A., Daskalopoulou V. and Amiridis V.

An assessment of microclimatic conditions inside vegetated and non-vegetated small-scale open spaces in the Athens urban environment

Melas E., Tsiros I., Thoma E., Proutsos N., Pantavou K. and Papadopoulos G.

Exposure of Athens population to environmental stress

Katavoutas G., Founda D.

Artificial neural networks applied on field monitoring data for the estimation of thermal sensation

Pantavou K. and Delibasis K. K.

Exposure to hot thermal conditions and heat-related symptoms in Cyprus: a field survey study among pedestrians

Pantavou K., Giallourous G., Lykoudis S., Markozannes G., Constantinou E., Panagi A., Economou M., Georgiou A., Pilavas A., Theodoridou M., Kinni P., Bonovas S., Cartalis C. and Nikolopoulos G.K.

Field surveys on the subjective assessment of sound level in urban settings

Melas E.¹, Pantavou K., Asimakopoulos V., Kotronarou A., Lykoudis S., and Tsiros I. X.

Identifying patterns of airborne pollen distribution using a synoptic climatology approach

Paschalidou A. K., Psistaki K., A Charalampopoulos A., Vokou D., Kassomenos P., Damialis A.

The impact of the number of scale categories used in field questionnaire surveys to assess thermal sensation

Pantavou K., Melas E., Koletsis I., Lykoudis S. and Tsiros X.I.

The use of the RD-69 (Joss-type) disdrometer towards the estimation of the ZR relations for stratiform and convective rainfall events

Feloni, E., Bournas, A., Baltas, E. and Nastos P.T.

Investigating The Snow Water Equivalent In Greece

Voudouri K. A., Ntona M. M. and Kazakis N.

Addressing flood risk in the Rafina stream basin (Attica, Greece) in the framework of the CyFFORS project

Giannaros C., Kotroni V., Lagouvardos K., Oikonomou C., Haralambous H. and Papagiannaki K.

Evaluating the effects of urban design elements on human thermal sensation in summer

Tseliou A., Koletsis I., Tsiros I. X., Lykoudis S. and Pantavou K.

The influence of air temperature on the propagation of road traffic noise

Begou P. and Kassomenos P.

Mapping Local Climate Zones by implementing the WUDAPT method: A case study for Thessaloniki, Greece

Adamopoulou L. and Karatzas K.

Cooling effect and thermal comfort patterns of a courtyard and its adjacent semi-open spaces under Mediterranean climate summer conditions

Thoma E., Melas E., Tsiros I.

Investigation of heat transfer in soil through a spatio-temporal analysis of soil temperature in Ioannina, Greece

Ioannidis T. and Bakas N. A.

An integrated hydrometeorological-hydraulic modelling system for investigating flooding

Papadopoulos A., Varlas G., Papaioannou G., Mentzafou A., Terti G., Markogianni V., Panagopoulos Y., Spyrou C., Katsafados P., Loukas A. and Dimitriou E.

Poster Session for Weather Analysis and Extremes, Remote Sensing

Weather analysis and Extremes

Extreme weather events and tree cover in Greece

Mourmouri E., Radoglou K., Milios E. and Kitikidou K.

Determination of the theoretical distribution functions of the extreme air temperature values in Thessaloniki, Greece

Topouzi M., Farmakis N., Karacostas Th., Antoniou I. and Douka M.

The July 10, 2019 Catastrophic Supercell over Northern Greece. Part II: Numerical modelling

Pytharoulis I., Karacostas T., Christodoulou M. and Matsangouras I.

Verification of Intense Precipitation over diverse climatological areas

Boucouvala D., Gofa F. and Kolyvas C.

A new high-resolution precipitation database over Greece

Ntagkounakis G.E., Nastos P.T., Kapsomenakis J

Analysis and Verification of Marine Warnings issued by HNMS

Foukis I., Petropoulos G., Kotta D., Kouroutzoglou I., Myrsilidis M and Flocas H.

Synchronization phenomena of extreme weather events in Greece

Vylliotis K., Kioutsioukis I.

Weather radar-based supercell tracking: The case of 10 July 2019, Macedonia, Greece

Karoutsos G., N.R. Dalezios, M. Spiliotopoulos, I.N. Faraslis

Studying the effects of dust particles on cloud microphysical processes

Chaniotis I., Platlakas P. and Kallos G.

An extraordinary shelf cloud over Thessaloniki, Greece, on 8 June 2014: Formation conditions and associated severe weather

Sioutas M., Traianou E.

Associating short-duration precipitation extreme events with land surface temperature in Thessaloniki

Pakalidou N., Karacosta P. and Douka M.

Evaluation of five reanalysis products in reproducing the spatio-temporal characteristics of air temperature over Greece

Voulanas D., Mavromatis T.

Correlation between the extreme 24-hour rainfall events and altitude in north Greece (Chalkidiki region)

Kastridis A.

Remote Sensing

S5P/TROPOMI atmospheric products over Thessaloniki, Greece; validation activities of the Laboratory of Atmospheric Physics, AUTH

Koukouli, M.E., Garane, K., Karagkiozidis, D., Gkertsis, F., Michailidis, K., Siomos, N., Voudouri, K. A., Mermigkas, M., Topaloglou, C., Sarakis, C., Balis, D. S. and Bais A.

The LAP/AUTH Quality Assessment and Validation Chain applied to multiple satellite sensors' Total Ozone Columns

Garane K., Koukouli M., Lerot C., Heue K.P., Valks P., Vlietindk J., Verhoelst T., Romahn F., Redondas A., Zimmer W., Xu J., Balis D., Lambert J.-C., van Roozendaal M., Loyola D., Eleftheratos, K., and Zerefos C.

A case study of a supercell on the 10th July, 2019 based on satellite data

Angelidou E., Feidas H.

Volcanic SO₂ Layer Height by S5P/TROPOMI; the case of the 2019

Koukouli, M.E., Hedelt, P., Michailidis, K., Taylor, I.A., Balis, D. S., Grainger, R.G., Efremenko, D., Loyola, D. and Retscher C.

A technique to retrieve vertical concentration profiles of individual aerosol species based on the synergy of lidar and spectrophotometer measurements

Siomos N., Fountoulakis I., Gkertsis F., Voudouri K. A., Michailidis K., Garane K., Karagkiozidis D., Karanikolas A., Natsis A., Koukouli M. E., Bais A.F., Balis D.

Early detection of the cloud convection in Meteosat imagery using Lightning activity

Papadopoulou E., Kolios S. and Hatzianastasiou N.

Can we decompose a complex aerosol profile to its components?

Giannakaki E., Shang X., Filioglou M. and Komppula M.

Desert dust episodes in the Mediterranean Basin during the period 2005-2018

Gavrouzou M., Hatzianastasiou N., Gkikas A., Mihalopoulos N.

Validation of the NWC SAF CRR and CRR-Ph products over the Greek area using rain gauge data as ground truth

Karagiannidis A., Lagouvardos K., Kotroni V. and Giannaros T.M.

Estimation of the Spatio-temporal Distribution of wildfires in the Mediterranean Basin with the use of Remote Sensing Data and Correlation with Biomass Burning Aerosol Load

Kakouri, A., Korras-Carraca M.B., Hatzianastasiou, N., Matsoukas, C., Gkikas, A., Kontos, T.

EVE: A reference lidar system for Cal/Val studies of space-borne missions

Paschou P., Siomos N., Amiridis V., Freudenthaler V., Tsekeri A., Biniotoglou I., Meleti C., Georgoussis G. and Von Bismarck J.

Vector Velocity Estimation of single Doppler Radar – Convective Thunderstorm analysis

Samos I., Flocas H.A., Emmanouil A., Louka P.

Comparison of inferred S5P/TROPOMI NO₂ surface concentrations with in-situ measurements over Central Europe

Pseftogkas A., Koukouli M.E., Skoulidou I., Balis D., Meleti C., Geffen J.V., Astrid Manders H.E. and Segers A.

Megacities around the globe: AOD spatial distribution and trends over the last two decades using spaceborne data

Papachristopoulou K., Raptis P.I., Gkikas A., Amiridis V. and Kazadzis S.

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**Remote Sensing and Numerical Modeling contributions to the investigation of the
June 16 – 17, 2020 severe hailstorm event over Drama, Greece**

Matsangouras I., Avgoustoglou E., AnthiA., Nastos P.T., Pytharoulis I.

Monitoring dust particle orientation with a novel polarization lidar at Athens

Tsekeri A., Amiridis V., Louridas A., Georgoussis G., Freudenthaler V., Metallinos S.,
Doxastakis G., Gasteiger J., Siomos N., Paschou P., Georgiou T., Tsaknakis G.,
Evangelatos C., and Binietoglou I.

Remote sensing analysis of the severe storm on August 8-9, 2020 over Evia, Greece

Matsangouras I., AnthiA., Nastos P.T., Pytharoulis I.

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Wednesday, September 29th 2021

09.00-10.30	ORAL SESSION Climate dynamics Chairpersons: TBA
09.00-09.15	Testing of the Regional Climatic Model COSMO-CLM (CCLM) driven by ERA-Interim at the Hellenic National Meteorological Service Avgoustoglou E., Bucchignani E., Voudouri A., Mercogliano P., S krimizeas P.
09.15-09.30	Evaluation of Seasonal Forecasting over Europe Manios E., Anagnostopoulou C. , Tolika K.
09.30-09.45	Can we predict global patterns of long-term climate change from short-term simulations? Mansfield, L. A., Nowack, P. J., Kasoar, M., Everitt, R.G., Col lins, W. J., Voulgarakis, A.
09.45-10.00	Impacts of changing North Atlantic atmospheric circulation on European climate under CO2 doubling Rousi E., Manola I., Rahmstorf S., Coumou D.
10.00-10.15	Future extreme heatwaves in the Middle East and North Africa region: a MENA-CORDEX perspective Zittis G., Hadjinicolaou P., Alma zroui M., Bucchignani E., Driouech F., Rhaz K. E., Kurnaz L., Nikulin G., Ntoumos A. , Ozturk T., Proestos Y., Stenchikov G. , Zaaboul R. , Lelieveld J.
10.15-10.30	Atmospheric Energetics Under Different Future Climate Change Scenarios Michaelides S.
10.30-11.30	<i>Poster Session for Climate Dynamics, Climate Change, Air quality (see details below) / Coffee Break</i>
11.30-13.30	ORAL SESSION Climate change Chairpersons: TBA
11.30-11.45	Evaluation of CMIP5 models climatology and trends for the recent past over the MENA region with emphasis on temperature extremes A Ntoumos A. , Hadjinicolaou P. , Zittis G., Lelieveld J.
11.45-12.00	Future Climate Change Impact on Wildfire Danger over the Mediterranean: the case of Greece Rovithakis A. , Voulgarakis A. , Grillakis M. ,Giannakopoulos C. and Karali A.
12.00-12.15	On the assessment of RCMs in simulating deep cyclones over the Mediterranean region: Impacts on the storm surges of coastal areas Tolika K., Makris C., Baltikas V. , Velikou K. and Krestenitis Y.
12.15-12.30	Fast responses on pre-industrial climate due to present-day aerosols based on three Earth System Models Zanis P., Akritidis D., Georgou lias A.K., Kalisoras A., Deushi M., Nabat P., Olivie D., Oshima

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	N., Schulz M., Allen R.J.
12.30-12.45	Spatial and temporal evolution of drought conditions in the eastern Mediterranean Kostopoulou E., Giannakopoulos C. and Varotsos K.V.
12.45-13.00	The impact of climate change on the tomato growing season in Greece Anagnostopoulou C., Kalfas I. and Dourvanaki K.
13.00-13.15	Heat-related mortality under climate change and the impact of adaptation through air conditioning: A case study from Thessaloniki, Greece Kouis P. Psistaki K., Yiallourous G., Kakkoura M., Stylianos K., Papatheodorou S. I., Paschalidou A. K.
13.15-13.30	The impact of climate change on a data-scarce watershed hydrology using bias corrected RCMs Venetsanou P., Lazoglou G., Anagnostopoulou C., Voudouris K.
13.30-15.00	<i>Lunch break</i>
15.00-16.30	ORAL SESSION Air quality I Chairpersons: TBA
15.00-15.15	Air quality monitoring in the urban area of Ioannina, Greece Begou P., Petrou I., Ladia E. and Kassomenos P.
15.15-15.30	Prediction of ozone concentration using artificial intelligence and machine learning techniques Moustris K.P., Nastos P.T.
15.30-15.45	Sources of atmospheric organic particulate matter in Patras, Greece Vasilakopoulou C., Florou K., Jorga S. and Pandis S.N.
15.45-16.00	Eastern Mediterranean high summer ozone levels and the associated synoptic meteorological conditions Kalabokas P., Kassomenakis J., Mihalopoulos N., Zerefos C.
16.00-16.15	An innovative method to arrive at high resolution emissions for city scale air quality modeling Kakouri, A., Ramacher, M., Athanasopoulou, E., Grivas, G., Speyer, O., Karl, M., Kontos, T., Gerasopoulos E.
16.15-16.30	The regime of particulate matter PM₁, PM_{2.5} and PM₁₀ in the city center of Ioannina Michailidis I., Gavrouzou M., Hatzianastassiou N.

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16.30-17.00	<i>Coffee break</i>
17.00-18.00	ORAL SESSION Air quality II Chairpersons: TBA
17.00-17.15	Investigation of the mineral dust concentration and light absorption in central Los Angeles employing a novel technique Farahani V. J., Pirhadi M., Sole imanian E., Altuwayjiri A., and Sioutas C.
17.15-17.30	The effect of regional sources on cloud properties during an extreme warm-air advection in the Arctic Bossioli E., Sotiropoulou G., Methymaki G. and Tombrou M.
17.30-17.45	Investigation of volcanic emissions at Antikythera PANGEA station Kampouri A., Amiridis V., Solomos S., Gialitaki A., Spyrou C., Marinou E., Papagiannopoulos N., Mona L., Georgoulas A.K., Akritidis D., Pytharoulis I., Karacostas T. and Zanis P.
17.45-18.00	Year-long greenhouse gases measurements at the urban environment of Athens, Greece Bougiatioti A., Pierros F., Dimitriou K., Quehe P.-Y., Delmotte P., Ramonet M. and Mihalopoulos N.
18.00	Adjourn

Poster Session for Climate Dynamics, Climate Change, Air quality

Climate Dynamics

On the study of the heat wave of 2019 in European capital cities: Application of the updated heat wave index EHF (Excess Heat Factor)

Voudouri M., Tolika K., Anagnostopoulou C. and Lagouvardos K.

Comparison of two different setups of RegCM4 model over the Mediterranean: Present time simulations

Velikou K., Tolika K.

The impact of Madden-Julian Oscillation on the European climate

Kerasilidou M., Anagnostopoulou C. and Tolika K.

The Cold Winter Spells over the Balkan Peninsula: A climatological and dynamic analysis

Tringa E., Tolika K., Kostopoulou E. and Anagnostopoulou C.

A contribution to the study of the Vardaris wind regime of the last 60 years

Dagkli V., Parasakis I., Brikas D. and Sarras C.

How different land surface schemes and model resolution affect simulated soil moisture-temperature coupling over the MENA region

Constantinidou K., Hadjinicolaou P., Zittis G., and Lelieveld J.

Future changes of East Mediterranean summer atmospheric circulation under high emission scenarios of CMIP5 and CMIP6 project

Logothetis I., Tourpali K., Misios S., Zanis P.

Trends in weather type frequencies across Europe

Petrou I., Kassomenos P., Ladia E. and Mpegou P.

Spatial interpolation methods for distribution of Regional Climate Models' daily precipitation at basin scale

Venetsanou P., Skoulikaris Ch., Voudouris K.

Climate Change

Evaluation and mapping of heating degree days in Greece

Spyropoulou E. and Kostopoulou E.

Trend analysis of snow height time series in the University Forest of Pertouli, Central Greece

Stefanidis S., Stathis D. and Dafis S.

Estimation of the carbon and energy fluxes of a forest plantation in a lignite mine restoration

Markos N. and Radoglou K.

Evaluating potential fire behaviour for the Mediterranean under climate change

Bacciu V., Hatzaki M., Del Giudice L., Karali A., Papachristopoulou K. and Giannakopoulos C.

Water availability changes for natural vegetation development in the mountainous area of Metsovo (N. Greece) for the period 1960-2000

Proutsos N., Tsagari C., Tsaousidis A., Tsiros I.X.

Climatic change at Macedonia Greece, using climatic parameters

Grimpylakos G.

Greenhouses and radiative forcing: is our increased need for food the new unknown for future climate scenarios?

Meleti C. , Garane K., Koukouli M.E. Balis D.

Impact of climate change on energy performance of Hellenic non-residential buildings

Droutsas K.G., Kontoyiannidis S., Balaras C.A., Argiriou A. A., Dascalaki E. G., Varotsos K. V., Giannakopoulos C.

Air quality

Estimation of chronic bronchitis incidence in adults due to PM₁₀ exposure in Athens, Greece

Ntourou K.S., Manousakis N.M, Moustris K.P.

Low-cost portable air quality sensing device quantify human exposure in city environment

Spyropoulos G., Nastos P.T. and Moustris K.P.

PM₁₀ concentrations at Ioannina and relationship with meteorological conditions

Sindosi O. A., Hatzianastassiou N., Bartzokas A., Markozannes G. , Rizos E., Ntzani E.

Biomass Burning Aerosol Optical Properties associated with wildfires over the Mediterranean Basin based on Satellite Data

Manthos I., Houssos E.E. , Papadimas C.D., Hatzianastassiou N., Koutsias N., Fotiadis A.

Airborne dust chemistry and health risk assessment in the Sistan Basin, southeast Iran

Kaskaoutis D. G., Dahmardeh Behrooz R., Grivas G., Esmaili-Sarj Bahramifar N., Mihalopoulos N.

Synergy between different earth observation platforms toward the estimation of the intra-urban population exposure to wintertime air pollution of Athens

Athanasopoulou, E., Grivas, G., Kakouri, A., Ramacher, M., Speyer, O., Karl, M., Gerasopoulos, E.

Studying the Dispersion of a Chemical Agent in an Indoor Environment

Ladia E., Petrou, I. , Begou, P., Kassomenos P.

Simultaneous assessment of indoor and outdoor PM concentration relationship in a typical rural residence in Greece

Kosmopoulos G., Salamalikis V., Tzoumanikas P. , Kazantzidis A .

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Air quality impacts on human health. The case of Athens, Greece

Dimitriadou L., Nastos P., Gerasopoulos E., Kapsomenakis J., Zerefos C.

Atmospheric lapse rates and humidity profiles during dust storm events in the central-eastern Mediterranean basin

Zaverdinou M., Kolios S. and Hatzianastasiou N.

A composite air quality-climate quantification approach

Alimissis A., Tzanis C.G. and Koutsogiannis I.

Mass concentration of airborne particles and their characteristics at Akrotiri station (Chania) during a summer campaign

Chatoutsidou S.E. and Lazaridis M.

Temporal variation of particulate matter and adverse health effects in the greater Volos area, Greece

Proias G.T., Moustris K.P., Nastos P.T.

Health impacts from exposure to PM_{2.5}, black and organic carbon in Europe

Paisi N., Chowdhury S., Kushta J., Georgiou G., Lelieveld J.

Variability of CO₂, CH₄ and CO column averaged mixing ratios from two years of measurements in Thessaloniki, Greece, using a portable EM27/SUN FTIR spectrometer

Mermigkas M., Topaloglou C., Balis D. and Hase F.

Levels and sources of Polycyclic Aromatic Hydrocarbons at the Port of Piraeus

Tavernaraki K., Tsiodra I., Papoutsidaki K., Tsagaraki M. Zampas P., Kouvarakis, G.

Grivas G., Liakakou E., Stavroulas I., Gerasopoulos E., Mihalopoulos N.

Levels and variability of gaseous acidic compounds in the atmosphere of Athens

Liakakou E., Paraskevopoulou D., Speyer O. and Myriokefalitakis S.