Curriculum Vitae

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Nationality: Greek
Date of Birth: 22.12.1983

Summary

Raptis Ioannis-Panagiotis is a physicist with 8 years of experience on Atmospheric Physics research. He has studied at National Kapodistrian University of Athens (Diploma in Physics, MSc in Environmental Physics, PhD in Natural Sciences). He has worked at National Observatory of Athens under various projects, where he specialized in the installation, maintenance and operation of measuring instruments. Also, he has worked at PMOD/WRC in Davos, Switzerland where he specialized in aerosol research and calibration procedures of innovative instruments. He has 12 accepted publications in peer reviewed scientific journals and 72 citations (10/01/2019, source google scholar) and 16 publications in conference proceedings.

Scientific Interests

•Solar radiation measurements and techniques using ground based and satellite based instrumentation
•Aerosol research based on ground based sun-photometric measurements
•Algorithm development for aerosol and trace gases retrieval
•Aerosol and solar UV satellite validation activities
•Development, characterization, calibration, quality control of solar spectroradiometer instrumentation
•Solar UV forecast and health effects

Education

PhD in Department of Physics, National Kapodistrian University of Athens, Greece

Title: Study of optical properties of aerosols and trace gases using spectral solar irradiance measurements (December 2018)

MSc in Environmental Physics, at National Kapodistrian University of Athens, Greece,

Thesis: Experimental Study of Structures in Internal Atmospheric Boundary Layers (2011)

Diploma in Physics at National Kapodistrian University of Athens, Greece,

Thesis: Numerical Study of Photochemical Gases inside an office space. (2009)

Work Experience

2016-2017: Physikalisch-Meteorologisches Observatorium Davos- World Radiation Center, Switzerland. GEO-CRADLE project

2014-2016: National Observatory of Athens, Greece. KRIPIS project, SOLAR-ARISTOTELIS project

2011-2013: Atmospheric Physics Laboratory National Kapodistrian University of Athens Greece.

2009-2013: National Kapodistrian University of Athens, Teaching Introductory Atmospheric Physics Laboratory to Undergraduate students

2010-2011: National Kapodistrian University of Athens, Secretary work for Vocational Training of Undergraduate Students

Participation in a number of field campaigns including : NAWM , Skyros 2011, SAWM, Karpathos

2012, CHARADMEXP, Crete 2014, IPC-XII, Davos Switzerland, 2015, PRETECT, Crete 2017.

Experience in installing, maintaining and operating sunphotometric instruments including: Cimel sunphtometer, MFR, UVMFR, PSR, PANDORA, Microtops, PFR, pyranometers, pyrheliometers.
Experience in radiative transfer modeling, data and time series analysis and developing methods and tools for retrieving atmospheric variables.
Matlab, fortran and python expert user.

Languanges

Greek Level C2
English Level C2 (Proficiency in English, 1999)
French Level B1 (Diplôme d' études en langue française, 1er Degré, 2001)
Spanish Level B1

Reviewer in Scientific Journals

Atmospheric Chemistry and Physics, Atmospheric Environment, Atmospheric Measurement Techniques, Energy, International Journal of Remote Sensing, Solar Energy

Publications in peer reviewed journals

1. **Raptis, P. I.,** Kazadzis, S., Eleftheratos, K., Kosmopoulos, P., Amiridis, V., Helmis, C., & Zerefos, C. , 2015. Total ozone column measurements using an ultraviolet multi-filter radiometer. International Journal of Remote Sensing, 36(17), 4469-4482.
2. Dimitra Founda, Stelios Kazadzis, Nikolaos Mihalopoulos, Evangelos Gerasopoulos, Maria Lianou, and **Panagiotis I. Raptis**, 2016Long-term visibility variation in Athens (1931–2013): a proxy for local and regional atmospheric aerosol loads , Atmos. Chem. Phys., 16, 11219–11236, 2016 / doi:10.5194/acp-16-11219-2016
3. Kazadzis, S., **Raptis, P.,** Kouremeti, N., Amiridis, V., Arola, A., Gerasopoulos, E., and Schuster, G. L.,2016, Aerosol absorption retrieval at ultraviolet wavelengths in a complex environment, Atmos. Meas. Tech., 9, 5997-6011, doi:10.5194/amt-9-5997-2016
4. **Raptis I.P**, Kazadzis S. , Psiloglou B. , Kouremeti N , Kosmopoulos P., Kazantzidis A., 2017, Measurements and model simulations of solar radiation at tilted planes, towards the maximization of energy capture, Energy , 130, pp.570-580.
5. Tsekeri, A., Lopatin, A., Amiridis, V., Marinou, E., Igloffstein, J., Siomos, N., Solomos, S., Kokkalis, P., Engelmann, R., Baars, H., Gratsea, M., **Raptis, P. I.,** Binietoglou, I., Mihalopoulos, N., Kalivitis, N., Kouvarakis, G., Bartsotas, N., Kallos, G., Basart, S., Schuettemeyer, D., Wandinger, U., Ansmann, A., Chaikovsky, A. P., and Dubovik, O., 2017, GARRLiC and LIRIC: strengths and limitations for the characterization of dust and marine particles along with their mixtures, Atmos. Meas. Tech., 10, 4995-5016, https://doi.org/10.5194/amt-10-4995-2017.
6. Panagiotis Kosmopoulos, Stelios Kazadzis, Michael Taylor, Eleni Athanasopoulou, Orestis Speyer, **Panagiotis Raptis**, Eleni Marinou, Emmanouil Proestakis, Stavros Solomos, Evangelos Gerasopoulos, Vassilis Amiridis, Alkiviadis Bais, and Charalabos Kontoes, 2017, Dust impact on surface solar irradiance assessed with model simulations, satellite observations and ground-based measurements, Atmospheric Measurement Techniques, 10(7), pp.2435-2453.
7. Kazadzis, S., Founda, D., Psiloglou, B., Kambezidis, H., Mihalopoulos, N., Sanchez-Lorenzo, A., Meleti, C., **Raptis, P. I.,** Pierros, F., and Nabat, P., 2018 Longterm series of surface solar radiation at Athens, Greece, Atmospheric Chemistry and Physics, 18(4), pp.2395-2411.
8. **Raptis, P.I.,** Kazadzis, S., Gröbner, J., Kouremeti, N., Doppler, L., Becker, R. and Helmis, C., 2018. Water vapour retrieval using the Precision Solar Spectroradiometer. Atmospheric Measurement Techniques, 11(2), p.1143.
9. Kazadzis, S., Kouremeti, N., Diémoz, H., Gröbner, J., Forgan, B. W., Campanelli, M., Estellés, V., Lantz, K., Michalsky, J., Carlund, T., Cuevas, E., Toledano, C., Becker, R., Nyeki, S., Kosmopoulos, P. G., Tatsiankou, V., Vuilleumier, L., Denn,

F. M., Ohkawara, N., Ijima, O., Goloub, P., **Raptis, P. I.,** Milner, M., Behrens, K., Barreto, A., Martucci, G., Hall, E., Wendell, J., Fabbri, B. E., and Wehrli, C., 2018, Results from the Fourth WMO Filter Radiometer Comparison for aerosol optical depth measurements, Atmos. Chem. Phys., 18, 3185-3201, https://doi.org/10.5194/acp-18-3185-2018, .

10. **Raptis, I.-P.**, Kazadzis, S., Eleftheratos, K., Amiridis, V., Fountoulakis, I., 2018, Single Scattering Albedo's Spectral Dependence Effect on UV Irradiance. Atmosphere , 9, 364.
11. Kosmopoulos, P.G., Kazadzis, S., Taylor, M., **Raptis, P.I.,** Keramitsoglou, I., Kiranoudis, C. and Bais, A.F., 2018. Assessment of surface solar irradiance derived from real-time modelling techniques and verification with ground-based measurements. Atmospheric Measurement Techniques, 11(2), p.907.
12. Kokkalis, P., K Al Jassar, H., Solomos, S., **Raptis, P.I.,** Al Hendi, H., Amiridis, V., Papayannis, A., Al Sarraf, H. and Al Dimashki, M., 2018. Long-Term Ground-Based Measurements of Aerosol Optical Depth over Kuwait City. Remote Sensing, 10(11), p.1807.

Publications in peer conference proceedings

1. **Ioannis Panagiotis Raptis**, Constantinos Helmis ,"Quadrant Analysis of the Heat and Momentum Fluxes at the Transition Layer between the Marine Atmospheric Boundary Layer and the developed Internal Boundary Layer close to the coastline", EGU General Assembly 2013

2. V. E. Kostopoulos, C. G. Helmis, **P. I. Raptis** "Experimental Study of the Turbulent Structure of the Surface Marine Atmospheric Boundary Layer over the Aegean Pelagos Under Etesian Winds", Advances in Meteorology, Climatology and Atmospheric Physics Springer Atmospheric Sciences 2013, pp 1063-1068

3. Q. Wang, D. Khelif, J. Kalogiros, D. Tramp, C. Cherrett, **P. Raptis**, C. Helmi, D. Jorgensen, Ch. Zappa, I. Sears, J. Williams, 2012: "Aircraft Measurements of the Atmosphere and the Upper Ocean During DYNAMO Using NOAA P3", AGU Fall Meeting San Francisco, USA, 3-7 December 2012

4. **Raptis I.P.**,Kazadzis S.,B. Bohn, N. Mihalopoulos,M. Gratsea, H.Berresheim, F. Rohrer, M. Adam , "A Method for Calculating O1D and NO2 Photolysis Frequencies using satellite based UV solar radiation retrievals",12th International Conference on Meteorology, Climatology and Atmospheric Physics COMECAP 2014

5. Kazadzis S., **Raptis I.P.**, V. Psiloglou, Kazadzidis A, Bais A.,"Solar Radiation Measurements and Model Calculations at Inclined Surfaces", 12th International

Conference on Meteorology,Climatology and Atmospheric Physics COMECAP 2014

6. Total VOC's, PM10 and PM2.5 concentrations produced by an Er: YAG Laser during dental cavity formation Tzoutzas I., Karveli A., **Raptis P.I.**, Helmis C. SOLA (International Society for Oral Laser Applications)8th World Conference , Beijing 20-21 Sept. 2014

7. **Ioannis Panagiotis Raptis**,Panagiotis Kokkalis, Vassilis Amiridis, Michael Taylor, and Stelios Kazadzis: A case study of columnar marine and dust particle ratios calculated with photometric and lidar measurements during the CHARADMEXP campaign, EGU 2015, Vienna Austria

8. Papaynnis A, Argyroyli A, Kokkalis P, Tsaknakis G, Binietoglou I, Solomos S, Kazadzis S, Samaras S, Bockmann C, **Raptis PI**, Amiridis V, Vertical Profiles of Aerosol optical and Microphysical properties during a rare case of long range transport of mixed biomass burning polluted dust aerosols from the russian federation Kazakhstan to Athens, Greece, ILRC 2015, New York, USA

9. Tsekeri A., Amiridis V., Lopatin A., Marinou E., Pikridas M., Sciare J., Gerasopoulos E., Liakakou E., Baars H., Kottas M., Kokkalis P., **Raptis P.**, Solomos S., Binietoglou I., Mihalopoulos N., Engelmann R., Wandinger U., Ansmann A., Dubovik O. and Nenes A.' Aerosol vertical profiling utilizing the synergy of lidar, sunphotometry and in-situ measurements in the framework of the ACTRIS-2 campaign in Athens, ILRC 2015, New York, USA

10. **Raptis Panagiotis Ioannis**, Kazadzis Stelios, Eleftheratos Kostas, Kosmopoulos Panagiotis, AmiridisVassilis, "OMI Total Ozone Column Product validated against UVMFR retrievals", ATMOS 2015, Herakleion, Greece

11. **Raptis Ioannis Panagiotis**, Kazadzis Stelios, Amiridis Vassilis, Aerosols Ultraviolet Single Scattering Albedo Retrievals above an urban environment, International Skynet Workshop, Roma, Italy, March 2016

12. Panagiotis Kosmopoulos, Stelios Kazadzis, Michael Taylor, Hesham Mohamed El-Askary,**Panagiotis Raptis**, IfigeniaKeramistsoglouand Christos Kiranoudis, : Estimation of the solar energy potential in Egypt by developing high resolution solar Atlas and nowcasting service in real time, AGU 2016 Fall Asembly, GC51C-1173, 12-16 December, San Francisco, USA, 2016

13. **Raptis I Panagiotis** , Kazadzis Stelios, Kouremeti Natalia2, Mihalopoulos Nikolaosl, Amiridis Vassilis3, Gerasopoulos Evangelos Actinometric platform for solar spectral and air quality measurements, COMECAP, Thessaloniki, 2016

14. Kosmopoulos, P.G., Kazadzis, S., Taylor, M., **Raptis, P.I.**,Kontoes, C.,

ElAskary, H., Keramitsoglou, I., and Kiranoudis, C.: The Solar Energy NowcastingSystEm (SENSE): Pilot applications and validation of results. EMS Annual Meeting 2017, Vol. 14, EMS2017-50, 4-8 September, Dublin, Ireland, 2017

15. Alexandra Tsekeri, VassilisAmiridis, Anton Lopatin, Eleni Marinou, Eleni Giannakaki, Michael Pikridas, Jean Sciare, Eleni Liakakou, Evangelos Gerasopoulos, Sebastian Duesing, Joel C. Corbin, Martin Gysel, Nicolas Bukowiecki, Holger Baars, Ronny Engelmann, Birgit Wehner, Michael Kottas, Dimitra Mamali, Panagiotis Kokkalis, **Panagiotis I. Raptis**, IasonasStavroulas, Stavros Solomos, Ioannis Binietoglou, Nikolaos Mihalopoulos, Alexandros Papayannis, Julia Igloffstein, Ulla Wandinger, Albert Ansmann, Oleg Dubovik, Philippe Goloub, : Aerosol absorption vertical profiling from the synergy of lidar and sun-photometry: the ACTRIS-2 campaigns in Germany, Greece and Cyprus, European Physical Journal Web of Conferences (Vol. 176)

16. Vassilis Amiridis, Eleni Marinou, Alexandra Tsekeri, Michael Kottas, Emmanouil Proestakis, Eleni Tetoni, Anna Gialitaki, Vassiliki Daskalopoulou, Stavros Solomos, Antonis Gkikas, Dimitra Konsta, Doina Nicolae, LivioBelegante, DragosEne, Simona Andrei, Emil Carstea, Horatiu Stefanie, Alexandru Dandocsi, Mika Komppula, Maria Kanakidou, Nikos Michalopoulos, Nikos Kalivitis, George Kouvarakis, Marco Rosoldi, Monica Campanelli, Gelsomina Pappalardo, Ioannis Binietoglou, Stelios Kazadzis, **Panagiotis Raptis**, Joseph Ulanowski, Matthias Tesche, Detlef Mueller, Maria Kezoudi, Helen Smith, Franco Marenco and Dimitris Balis, The PreTECT campaign-Revealing the secrets of desert dust, European Lidar Conference 2018, Thesaloniki 3-5 July 2018