

**NAME:** Petr Pisoft  
**EMAIL:** petr.pisoft@mff.cuni.cz  
**YEAR OF BIRTH:** 1979



#### EDUCATION:

Major subjects: Physics, Atmospheric Physics, Meteorology, Climatology  
 Degree: prof. (full professorship, 2023), doc. (Associate Professor, 2012), Ph.D. (2006), RNDr. (Rerum Naturalium Doctor, 2003), Mgr. (MSc., 2002)

2008–2011 Bcs. studies, Philosophical Faculty, Palacky University Olomouc  
 2002–2006 Doctoral studies, Faculty of Mathematics and Physics, Charles University in Prague  
 1997–2002 MSc. studies, Faculty of Mathematics and Physics, Charles University in Prague

#### EXPERIENCE & LECTURING:

##### **Charles University in Prague, Faculty of Mathematics and Physics, Department of Atmospheric Physics, 2006–present**

- head of the department (2014–2023)
- supervisor of MSc. and Ph.D. theses
- lectures: Stratosphere (since 2007), Oceans in the climate system (since 2007), Atmospheric Physics Proseminar (since 2014), Methods of atmospheric remote sensing (since 2019), Middle Atmosphere Dynamics (since 2018), Propagation of Acoustic and Electromagnetic Waves in Atmosphere (since 2018), User friendly linux (2007–2015), Bases of applied physics of atmosphere (2012–2019), Models output analysis (2012–2019), Special climatological seminar (2012–2018), Meteorological computer seminar (2007–2013), Meteorological seminar for bachelors (since 2007), Data processing and visualisation in meteorology I (2012–2019), Statistical methods in meteorology and climatology (2003–2005), Seminar of the data treatment methods in physics (2003–2005)

##### **Czech University of Life Sciences Prague, Faculty of Agrobiology, Food and Natural Resources, Department of Agroecology and Biometeorology, 2010–present**

- supervisor of Msc. theses
- lectures: Air quality (since 2010), Applied Meteorology and Climatology (since 2014)

#### RESEARCH INTEREST:

My research area is generally atmospheric physics, meteorology, and climatology. I focus on the dynamics and variability of the middle atmospheric processes, mainly on the large-scale circulation, analysis of the wave activity, the impact of localized gravity wave forcing, or long-term trends. Over the past decade, a group oriented on middle atmospheric processes has been established under my supervision. This research is unique in the Czech Republic and we actively collaborate with other research teams abroad. Most of our studies are focused on the dynamical processes, wave forcing, trends, etc., utilizing a specific approach, including, e.g., GPS RO analysis and numerical simulations.

Besides the middle atmospheric studies, I have participated in research aiming at regional modeling, historical climate or atmospheric chemistry and urban climate. My lectures also cover subjects of atmospheric chemistry, air quality and physical oceanography.

**THESES SUPERVISION:**

- 3 Dissertation theses (1 ongoing, 2 defended, atmospheric physics, meteorology and climatology, Charles University in Prague)
- 5 Master theses (5 defended, atmospheric physics, meteorology and climatology, Charles University in Prague)
- 16 Master theses (1 ongoing, 13 defended, air quality and atmospheric chemistry, Czech University of Life Sciences Prague)
- 4 Bachelor theses (1 ongoing, 3 defended, atmospheric physics, meteorology and climatology, Charles University in Prague)
- 6 Student's project (atmospheric physics, meteorology and climatology, Charles University in Prague)

**CITATIONS AND AUTHOR ID:**

H-index (01/2024): 16 (WoS), 17 (Scopus), 20 (Google Scholar)

Number of citations (01/2024): 601 (WoS), 620 (Scopus), 1026 (Google Scholar)

ORCID: 0000-0002-5034-9169

ResearcherID: A-2422-2010

Scopus Author ID: 7801594925

Google Scholar ID: -NtQA1oAAAAJ

**INTERNATIONAL COLLABORATION:**

- Institute for Meteorology, University of Leipzig, Germany, research collaboration focused on the middle atmospheric dynamics and gravity waves, since 2014, 2 international projects, short-term visits
- Institute for Geophysics, Astrophysics, and Meteorology/Inst. of Physics and Wegener Center for Climate and Global Change, University of Graz, Austria, research collaboration focused on GPS RO profiles and gravity waves, since 2013, short-term visits, 3 months research visit in 2017, 4 months research visit in 2019
- Environmental Physics Laboratory, Faculty of Sciences of Ourense, University of Vigo, Spain, research collaboration focused on the middle atmospheric processes, since 2018
- University of Natural Resources and Life Sciences, Institute of Meteorology, Vienna, Austria, collaboration focused on the middle atmospheric processes, since 2019

**OTHER ACTIVITIES:**

- topical editor of *Annales Geophysicae* journal (ISSN 0992-7689/1432-0576)
- member of editorial board of *Advances in Mathematics, Physics and Astronomy* journal (ISSN 0032-2423)
- member of Board for Doctoral Studies in *Physics* (MFF UK)
- chairman of Board for Doctoral Studies P4F8 *Atmospheric Physics, Meteorology and Climatology* (MFF UK)
- guarantor of doctoral studies P4F8 *Atmospheric Physics, Meteorology and Climatology* (MFF UK)
- guarantor of master studies *Atmospheric Physics, Meteorology and Climatology* (MFF UK)
- member of Board for Doctoral Studies *Exploitation and Conservation of Natural Resources* 4106V029 (ČZU)
- member of Board for Doctoral Studies *Social Ecology* (FHS UK)
- member of Evaluation Panel P209 *Atmospheric Sciences, Hydrology, Physical Geography and Geophysics* of Czech Science Foundation
- member of the panel of evaluators of the National Accreditation Office in the field of *Physics* and *Earth Sciences*

**RESEARCH PROJECTS:**

- Natural and anthropogenic georisks, Operational Programme Johannes Amos Comenius CZ.02.01.01/00/22\_008/0004605 (**key team member**), 2024–2026
- Impacts of Climate Change on the Middle and Upper Atmosphere and Atmospheric Drag of Space Objects, international project ISSI team 544 (**co-investigator**), 2022–2023
- Middle atmosphere localized gravity wave forcing - formation, impact, and long-term evolution (MATELO-FILE), international project, GACR 21-20293J (**principal investigator**), 2021–2023
- Long-term trends of anthropogenic and natural origin in the stratosphere and upper atmosphere, GACR 21-03295S (**co-investigator**), 2021–2023
- Nonlinear interactions and information transfer in complex systems with extreme events, GACR 19-16066S (**team member**), 2019–2021
- Automatic generation of synoptic maps, InMeteo, applied research project MFF UK (**team member**), 2018
- The influence of greenhouse gases and other drivers on long-term trends in the stratosphere-mesosphere-thermosphere-ionosphere system, GACR 18-01625S (**co-investigator**), 2018–2020
- Synoptic situations in Central Europe and the influence of meteorological variables/RES production on electricity price, ČEZ a.s., applied research project MFF UK SMV/100473, **principal investigator**, 2018
- Analysis of specific meteorological processes, modelling and prediction assessment, and visualisation of the results, ČEZ a.s., applied research project MFF UK SMV/100352 (**principal investigator**), 2017
- Analysis of circulation in idealized model of uranium tailings on Příbram deposit, Diamo, applied research project MFF UK 17/002 (**team member**), 2017
- Middle atmosphere effects of localized gravity wave forcing - MATELO, international project GACR 16-01562J (**principal investigator**), 2016–2018
- Global climatology of the wind vector rotation – implications for the orographic internal gravity waves propagation, international project MOBILITY, MŠMT 7AMB16AT021 (**principal investigator**), 2016–2017
- Waves processes in the middle atmosphere and their significance for the coupling of selected atmospheric regions, GAUK 1474314 (**supervisor**), 2014–2016
- Regional climate models outputs for Czech Republic in 2015 - 2060, Glopolis, applied research project MFF UK SMV/100112 (**principal investigator**), 2016
- Stratospheric dynamics and coupling with troposphere and mesosphere, GAUK 108313 (**supervisor**), 2013–2015
- Global and regional climate model simulations in Central Europe in the 18th–20th centuries in comparison with observed and reconstructed climate, GACR P209/11/0956 (**team member**), 2011–2015
- Impact-targeted validation of statistical and dynamical downscaling models, GACR 205/08/1619 (**team member**), 2008–2012
- Specification of existing estimates of climate change impacts in hydrology, water management, agriculture and forestry sectors and proposals for adaptation options, SP/1a6/108/07 (**team member**), 2008–2012
- Analysis of regular oscillations in the climate system, GACR 205/07/p199 (**principal investigator**), 2006–2009
- Atmospheric teleconnections across North Atlantic region, GACR 205/05/2282 (**team member**), 2004–2007
- Development of regional climatic model, GACR 205/01/0804 (**team member**), 2003–2004
- Atlas of climate in the Czech Republic, VaV/740/2/03 (**team member**), 2002–2004
- Climatic change and the climate fluctuation, VaV/740/1/01 (**team member**), 2001–2002
- Solar wind instabilities and their propagation through the bow shock, 163/2000/B-FYZ/MFF (**team member**), 2000–2002
- Location and motion of the Earth's magnetopause and bow shock, 181/1999/B-FYZ/MFF (**team member**), 1999–2001
- Low-frequency variations of the ion flux in the magnetosheath (**team member**), 1999–2001

## REVIEWED PAPERS WITH IF:

1. Sacha, P., Zajicek, R., Kuchar, A., Eichinger, R., **Pisoft**, P., & Rieder, H. E. (2024). Disentangling the advective Brewer-Dobson circulation change. *Geophysical Research Letters*, 51, e2023GL105919. <https://doi.org/10.1029/2023GL105919>
2. Eichinger, R., Rhode, S., Garny, H., Preusse, P., **Pisoft**, P., Kuchař, A., Jöckel, P., Kerkweg, A., and Kern, B.: Emulating lateral gravity wave propagation in a global chemistry–climate model (EMAC v2.55.2) through horizontal flux redistribution, *Geosci. Model Dev.*, 16, 5561–5583, <https://doi.org/10.5194/gmd-16-5561-2023>, 2023
3. Karami, K., Borchert, S., Eichinger, R., Jacobi, C., Kuchar, A., Mehrdad, S., **Pisoft** P., Sacha P. (2023). The climatology of elevated stratopause events in the UA-ICON model and the contribution of gravity waves. *Journal of Geophysical Research: Atmospheres*, 128, e2022JD037907. <https://doi.org/10.1029/2022JD037907>
4. Brazdil, R., Dobrovolný, P., Mikšovský, J., **Pisoft**, P., Trnka, M., Mozný, M., and Balek, J.: Documentary-based climate reconstructions in the Czech Lands 1501–2020 CE and their European context, *Clim. Past*, 18, 935–959, <https://doi.org/10.5194/cp-18-935-2022>, 2022
5. Sacha P, Kuchar A, Eichinger R, **Pisoft** P, Jacobi Ch, Rieder HE (2021): Diverse dynamical response to orographic gravity wave drag hotspots — a zonal mean perspective, *Geophys. Res. Lett.*, 48, e2021GL093305. <https://doi.org/10.1029/2021GL093305>
6. **Pisoft** P, Sacha P, Polvani LM, Anel JA, de la Torre L, Eichinger R, Foelsche U, Huszar P, Jacobi C, Karlicky J, Kuchar A, Miksovsky J, Zak M and Rieder HE (2021): Stratospheric contraction caused by increasing greenhouse gases, to appear in *Env. Res. Lett.*, 16, 064038, <https://doi.org/10.1088/1748-9326/abfe2b>
7. Samtleben N, Kuchar A. Sacha P, **Pisoft** P, Jacobi C (2020): Mutual Interference of Local Gravity Wave Forcings in the Stratosphere. *Atmosphere* 2020, 11, 1249.
8. Samtleben, N., Kuchar, A., Sacha, P., **Pisoft**, P., and Jacobi, C. (2020): Impact of local gravity wave forcing in the lower stratosphere on the polar vortex stability: effect of longitudinal displacement, *Ann. Geophys.*, 38, 95–108, <https://doi.org/10.5194/angeo-38-95-2020>, 2020.
9. Huszar, P., Karlický, J., Doubalová, J., Sindelarova, K., Novakova, T., Belda, M., Halenka, T., Zak, M., and **Pisoft**, P. (2020): Urban canopy meteorological forcing and its impact on ozone and PM2.5: role of vertical turbulent transport, *Atmos. Chem. Phys.*, 20, 1977–2016, <https://doi.org/10.5194/acp-20-1977-2020>, 2020.
10. Samtleben, N., Jacobi, C., **Pisoft**, P., Sacha, P., and Kuchar, A. (2019): Effect of latitudinally displaced gravity wave forcing in the lower stratosphere on the polar vortex stability, *Ann. Geophys.*, 37, 507–523, <https://doi.org/10.5194/angeo-37-507-2019>, 2019
11. Sacha, P., Eichinger, R., Garny, H., **Pisoft**, P., Dietmüller, S., de la Torre, L., Plummer, D. A., Jöckel, P., Morgenstern, O., Zeng, G., Butchart, N., and Añel, J. A. (2019): Extratropical age of air trends and causative factors in climate projection simulations, *Atmos. Chem. Phys.*, 19, 7627–7647, <https://doi.org/10.5194/acp-19-7627-2019>, 2019.
12. Huszar, P., Belda, M., Karlický, J., Bardachova, T., Halenka, T., and **Pisoft**, P. (2018): Impact of urban canopy meteorological forcing on aerosol concentrations, *Atmos. Chem. Phys.*, 18, 14059–14078, <https://doi.org/10.5194/acp-18-14059-2018>, 2018
13. Miksovsky, J., Brazdil, R., Trnka, M., and **Pisoft**, P. (2019): Long-term variability of drought indices in the Czech Lands and effects of external forcings and large-scale climate variability modes, *Clim. Past*, 15, 827–847, <https://doi.org/10.5194/cp-15-827-2019>, 2019.
14. Sacha, P., Miksovsky, J., and **Pisoft**, P. (2018): Interannual variability of the gravity wave drag – vertical coupling and possible climate links, *Earth Syst. Dynam.*, 9, 647–661, <https://doi.org/10.5194/esd-9-647-2018>, 2018
15. Karlický, J., Huszar, P., Halenka, T., Belda, M., Zak, M., **Pisoft**, P., and Miksovsky, J. (2018): Multi-model comparison of urban heat island modelling approaches, *Atmos. Chem. Phys.*, 18, 10655–10674, <https://doi.org/10.5194/acp-18-10655-2018>
16. Huszar P, Karlicky J, Belda M, Halenka T, and **Pisoft** P (2018): The impact of urban canopy meteorological forcing on summer photochemistry, *Atmospheric Environment*, 176, 209–228, DOI:10.1016/j.atmosenv.2017.12.037, 2018
17. **Pisoft**, P., Sacha, P., Miksovsky, J., Huszar, P., Scherllin-Pirscher, B., and Foelsche, U. (2018): Revisiting internal gravity waves analysis using GPS RO density profiles: comparison with temperature profiles and application for wave field stability study, *Atmos. Meas. Tech.*, 11, 515–527, DOI: 10.5194/amt-11-515-2018, 2018.
18. Kuchar, A., W. T. Ball, E. V. Rozanov, A. Stenke, L. Revell, J. Miksovsky, P. **Pisoft**, and T. Peter (2017), On the aliasing of the solar cycle in the lower stratospheric tropical temperature, *J. Geophys. Res. Atmos.*, 122, 9076–9093, DOI:10.1002/2017JD026948
19. Sacha, P., Lilienthal, F., Jacobi, C., and **Pisoft**, P. (2016): Influence of the spatial distribution of gravity wave activity on the middle atmospheric dynamics, *Atmos. Chem. Phys.*, 16, 15755–15775, DOI:10.5194/acp-16-15755-2016, 2016

20. Huszar P, Belda M, Karlicky J, **Pisoft** P, and Halenka T (2016): The regional impact of urban emissions on climate over central Europe: present and future emission perspectives, *Atmos. Chem. Phys.*, 16, 12993-13013, DOI:10.5194/acp-16-12993-2016, 2016.
21. Miksovsky, J., Holtanova, E., and **Pisoft**, P. (2016): Imprints of climate forcings in global gridded temperature data, *Earth Syst. Dynam.*, 7, 231-249, DOI:10.5194/esd-7-231-2016, 2016
22. Zak M., Miksovsky J., **Pisoft** P. (2015): CMSAF Radiation Data: New Possibilities for Climatological Applications in the Czech Republic, *Remote Sens.* 7(11), 14445-14457; DOI:10.3390/rs71114445
23. Sacha, P., Kuchar, A., Jacobi, C., and **Pisoft**, P. (2015): Enhanced internal gravity wave activity and breaking over the Northeastern Pacific / Eastern Asian region, *Atmos. Chem. Phys.*, 15, 13097-13112, DOI:10.5194/acp-15-13097-2015, 2015.
24. Kuchar, A., Sacha, P., Miksovsky, J., and **Pisoft**, P. (2015): The 11-year solar cycle in current reanalyses: a (non)linear attribution study of the middle atmosphere, *Atmos. Chem. Phys.*, 15, 6879-6895, DOI:10.5194/acp-15-6879-2015, 2015.
25. Huth R., Miksovsky J., Stepanek P., Belda M., Farda A., Chladova Z., **Pisoft** P. (2015): Comparative validation of statistical and dynamical downscaling models on a dense grid in central Europe: temperature, *Theor. and Applied Climatology*, 120(3), pp 533-553.
26. Miksovsky J., Brazdil R., Stepanek P., Zahradnicek P., **Pisoft** P. (2014): Long-term variability of temperature and precipitation in the Czech Lands: an attribution analysis, *Climatic Change*, 125 (2), pp 253-264, DOI: 10.1007/s10584-014-1147-7
27. P. Sacha, U. Foelsche, P. **Pisoft** (2014): Analysis of internal gravity waves with GPS RO density profiles, *Atmos. Meas. Tech.*, 7, 4123-4132, doi:10.5194/amt-7-4123-2014
28. Holtanova, E., Kalvova, J., **Pisoft**, P., Miksovsky, J., (2014): Uncertainty in regional climate model outputs over the Czech Republic: the role of nested and driving models, *Int. Journal of Climatology*, 34(1), pp. 637-646, DOI: 10.1002/joc.3663
29. **Pisoft**, P., Holtanova, E., Huszar, P., Kalvova, J., Miksovsky, J., Raidl, A., Žak, M., Zemankova, K., (2013): Manifestation of reanalyzed QBO and SSC signals, *Theoretical and Applied Climatology*, 112 (3-4), pp. 637-646, DOI: 10.1007/s00704-012-0752-5
30. Brazdil R., Zahradnicek P., **Pisoft** P., Stepanek P., Belinova M., Dobrovolny P. (2012): Temperature and precipitation fluctuations in the Czech Republic during the period of instrumental measurement, *Theoretical and Applied Climatology*, 110 (1-2), pp. 17-34, DOI: 10.1007/s00704-012-0604-3
31. Holtanova, E., Miksovsky, J., Kalvova, J., **Pisoft**, P., Motl, M. (2012): Performance of ENSEMBLES regional climate models over Central Europe using various metrics, *Theoretical and Applied Climatology*, 108(3-4), pp. 463-470 DOI: 10.1007/s00704-011-0542-5
32. Huszar P, Miksovsky J, **Pisoft** P, Belda M, Halenka T, (2012): Interactive coupling of a regional climate model and a chemical transport model: evaluation and preliminary results on ozone and aerosol feedback. *Clim Res*, 51, pp, 59-88 DOI:10.3354/cr01054
33. **Pisoft**, P., Holtanova, E., Huszar, P., Miksovsky, J., Žak, M., (2012): Imprint of the 11-year solar cycle in reanalyzed and radiosonde datasets: a spatial frequency analysis approach, *Climatic Change*, 110(1-2), pp. 85-99, DOI: 10.1007/s10584-011-0147-0
34. **Pisoft**, P., Miksovsky, J., Kalvova, J., Raidl, A., Žak, M., (2011): Areal analysis of oscillations in 500 hPa temperature field: a pseudo-2D wavelet transform approach, *Int. Journal of Climatology*, 31(10), pp. 1545-1553 DOI: 10.1002/joc.2167
35. Holtanova, E., Kalvova, J., Miksovsky, J., **Pisoft**, P., Motl, M. (2010): Analysis of uncertainties in regional climate model outputs over the Czech Republic. *Studia Geophysica et Geodaetica*, 54, pp. 513-528, DOI: 10.1007/s11200-010-0030-x
36. Huszar, P., Cariolle, D., Paoli, R., Halenka, T., Belda, M., Schlager, H., Miksovsky, J. and **Pisoft**, P., (2010). Modeling the regional impact of ship emissions on NOx and ozone levels over the Eastern Atlantic and Western Europe using ship plume parameterization, *Atmospheric Chemistry and Physics*, 10(14), pp. 6645-6660, DOI: 10.5194/acp-10-6645-2010
37. **Pisoft**, P., Miksovsky, J. (2009): An analysis of the spatial distribution of approximate 8 years periodicity in NCEP/NCAR and ERA-40 temperature fields, *European Journal of Physics*, 174, p. 147-155, DOI: 10.1140/epjst/ e2009-01097-3
38. **Pisoft**, P., Kalvova, J., Brazdil, R., (2004): Cycles and Trends in the Czech Temperature Series Using Wavelet Transforms, *Int. Journal of Climatology* 24, 13, pp. 1661-1670
39. Nemecek, Z., J. Safrankova, G. N. Zastenker, P. **Pisoft**, and K.Jelinek (2002): Low-frequency variations of the of the ion flux in the magnetosheath, *Planetetary and Space Science*, 50, 5-6, 2002, pp. 567-575.

40. Nemecek, Z., J. Safrankova, G. N. Zastenker, and P. **Pisoft** (2001): Statistical study of ion flux fluctuations in the magnetosheath, *Czech. J. Phys.*, 51, pp. 853–862
41. Nemecek, Z., J. Safrankova, G. N. Zastenker, P. **Pisoft**, and K. I. Paularena (2000): Spatial distribution of the magnetosheath ion flux, 33rd COSPAR Scientific Assembly, July 16–23, Warsaw, *Adv. Space Res.*, 30(12), 2751–2756
42. Nemecek, Z., J. Safrankova, G. N. Zastenker, P. **Pisoft**, K. I. Paularena, and J. D. Richardson (2000): Observations of the radial magnetosheath profile and a comparison with gasdynamic model predictions, *Geophys. Res. Lett.*, 27, No.17, pp. 2801–2804.

#### REVIEWED DISCUSSION PAPERS:

1. Eichinger, R., Rhode, S., Garny, H., Preusse, P., **Pisoft**, P., Kuchar, A., Jöckel, P., Kerkweg, A., and Kern, B.: Emulating lateral gravity wave propagation in a global chemistry-climate model (EMAC v2.55.2) through horizontal flux redistribution, EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2023-270>, **2023**
2. Kuchar, A., Sacha, P., Eichinger, R., Jacobi, C., **Pisoft**, P., and Rieder, H.: On the impact of Himalaya-induced gravity waves on the polar vortex, Rossby wave activity and ozone, EGU sphere [preprint], <https://doi.org/10.5194/egusphere-2022-474>, **2022**
3. Kuchar, A., Sacha, P., Eichinger, R., Jacobi, C., **Pisoft**, P., and Rieder, H. E. (2020): On the intermittency of orographic gravity wave hotspots and its importance for middle atmosphere dynamics, *Weather Clim. Dynam. Discuss.*, <https://doi.org/10.5194/wcd-2020-21>
4. Samtleben, N., Kuchař, A., Šácha, P., **Pisoft**, P., and Jacobi, C. (2020): Impact of local gravity wave forcing in the lower stratosphere on the polar vortex stability: effect of longitudinal displacement, *Ann. Geophys. Discuss.*, <https://doi.org/10.5194/angeo-2019-120>
5. Huszar, P., Karlický, J., Ďoubalová, J., Šindelářová, K., Nováková, T., Belda, M., Halenka, T., Žák, M., and **Pisoft**, P. (2020): Urban canopy meteorological forcing and its impact on ozone and PM<sub>2.5</sub>: role of vertical turbulent transport, *Atmos. Chem. Phys. Discuss.*, <https://doi.org/10.5194/acp-2019-486>
6. Samtleben, N., Jacobi, C., **Pisoft**, P., Sacha, P., and Kuchar, A. (2019): Effect of latitudinally displaced gravity wave forcing in the lower stratosphere on the polar vortex stability, *Ann. Geophys. Discuss.*, <https://doi.org/10.5194/angeo-2019-15>
7. Sacha, P., Eichinger, R., Garny, H., **Pisoft**, P., Dietmüller, S., de la Torre, L., Plummer, D. A., Jöckel, P., Morgenstern, O., Zeng, G., Butchart, N., and Añel, J. A. (2019): Extratropical Age of Air trends and causative factors in climate projection simulations, *Atmos. Chem. Phys. Discuss.*, <https://doi.org/10.5194/acp-2018-1310>
8. Huszar, P., Belda, M., Karlický, J., Bardachova, T., Halenka, T., and **Pisoft**, P. (2018): Impact of urban canopy meteorological forcing on aerosol concentrations, *Atmos. Chem. Phys. Discuss.*, <https://doi.org/10.5194/acp-2018-415>
9. Miksovsky J, Brazdil R, Trnka M., **Pisoft** P (2018): Long-term variability of droughts in the Czech Lands and large-scale climate drivers, *Clim. Past. Discuss.*, <https://doi.org/10.5194/cp-2018-61>
10. Karlický J, Huszar P, Halenka T, Zak M, Miksovsky J, and **Pisoft** P (2018): Multi-model comparison of UHI modeling approaches, *Atmos. Chem. Phys. Discuss.*, <https://doi.org/10.5194/acp-2018-3>
11. Sacha, P., Miksovsky, J., and **Pisoft**, P. (2018): Interannual variability of the gravity wave drag – vertical coupling and possible climate links, *Earth Syst. Dynam. Discuss.*, DOI:10.5194/esd-2018-1
12. **Pisoft**, P., Sacha, P., Miksovsky, J., Huszar, P., Scherllin-Pirscher, B., and Foelsche, U. (2017): Revisiting internal gravity waves analysis using GPS RO density profiles: comparison with temperature profiles and application for wave field stability study, *Atmos. Meas. Tech. Discuss.*, DOI:10.5194/amt-2017-238
13. Sacha, P., Lilienthal, F., Jacobi, C., and **Pisoft**, P. (2016): Influence of the spatial distribution of gravity wave activity on the middle atmospheric circulation and transport, *Atmos. Chem. Phys. Discuss.*, DOI:10.5194/acp-2016-548
14. Miksovsky, J., Holtanova, E., and **Pisoft**, P. (2015): Imprints of climate forcings in global gridded temperature data, *Earth Syst. Dynam. Discuss.*, 6, 2339–2381, DOI:10.5194/esdd-6-2339-2015
15. Sacha, P., Kuchar, A., Jacobi, C., and **Pisoft**, P. (2015): Enhanced internal gravity wave activity and breaking over the Northeastern Pacific/Eastern Asian region, *Atmos. Chem. Phys. Discuss.*, 15, 18285–18325, DOI:10.5194/acpd-15-18285-2015, 2015
16. Kuchar, A., Sacha, P., Miksovsky, J., and **Pisoft**, P. (2014): Solar cycle in current reanalyses: (non)linear attribution study, *Atmos. Chem. Phys. Discuss.*, 14, 30879–30912, DOI:10.5194/acpd-14-30879-2014.

17. Sacha, P., Foelsche, U., and **Pisoft, P. (2014)**: Analysis of internal gravity waves with GPS RO density profiles, *Atmos. Meas. Tech. Discuss.*, 7, 8311–8338, DOI:10.5194/amtd-7-8311-2014.
18. Huszar, P., Cariolle, D., Paoli, R., Halenka, T., Belda, M., Schlager, H., Miksovsky, J. And **Pisoft, P., (2010)**. Modeling the regional impact of ship emissions on NOx and ozone levels over the Eastern Atlantic and Western Europe using ship plume parameterization, *Atmos. Chem. Phys. Discuss*, 9(6), pp. 26735–26776, DOI:10.5194/acpd-9-26735-2009

#### THESES:

1. **Pisoft, P., (2012)**: Manifestation of reanalyzed QBO and SSC signals, 2012, Habilitation thesis, Charles Univesity, 107pp
2. **Pisoft, P., (2006)**: Climate System Variability by the Pseudo-2D Wavelet Transform, 2006, Ph.D. thesis, Charles Univesity, 97pp
3. **Pisoft, P., (2002)**: Wavelet Analysis of Meteorological time series, 2002, MSc. thesis, Charles Univesity, 93pp

#### OTHER REVIEWED PUBLICATIONS:

1. Kuchar, A., Sacha, P., Eichinger, R., Jacobi, C., **Pisoft, P.**, and Rieder, H. E. **(2020)**: On the intermittency of orographic gravity wave hotspots and its importance for middle atmosphere dynamics, *Weather Clim. Dynam.*, 1, 481–495, <https://doi.org/10.5194/wcd-1-481-2020>, 2020.
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