

Физика на атмосферата

2025

Plamen Mukhtarov, Rumiana Bojilova. Correlation Analysis Between Total Electron Content and Geomagnetic Activity: Climatology of Latitudinal, Seasonal and Diurnal Dependence. *Atmosphere*, 16, 4, Multidisciplinary Digital Publishing Institute (MDPI), 2025, ISSN:2073-4433, DOI:<https://doi.org/10.3390/atmos16040478>, 478. SJR (Scopus):0.627

Rumiana Bojilova, Plamen Mukhtarov, Petra Koucka Knizova, Katya Georgieva, Boian Kirov. Ionospheric disturbances during strong geomagnetic storm st. Patrick on 17 March 2015. *Comptes rendus de l'Académie bulgare des Sciences*, 78, 3, Издателство на БАН "Проф. Марин Дринов", 2025, ISSN:1310–1331(Print) / (Online) 2367–5535, DOI:<https://doi.org/10.7546/CRABS.2025.03.10>, 402-409. SJR (Scopus):0.16.

Dora Pancheva, Plamen Mukhtarov, Rumiana Bojilova. Unusually disturbed middle atmosphere during boreal winter 2023/2024 based on MERRA-2: Part 1. Two minor stratospheric warmings. *Advances in Space Research*, 75, 7, Elsevier, 2025, ISSN:0273-1177, DOI:<https://doi.org/10.1016/j.asr.2025.01.018>, 5499-5522. SJR (Scopus):0.663

2024

Gadzhev G., Ivanov V., Georgieva I., Ganey K.. Advanced Computing in Analysis of the Climate Changes Impact. *Proceedings of the 4th international conference on Numerical Methods for Scientific Computations and Advanced Applications (NMSCAA'24)*, Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, 2024, ISBN:978-619-7320-11-4, 11-15.

Gadzhev, G., Georgieva, I., Ganey, K., Ivanov, V., Miloshev, N.. Influence of the Grid Resolutions on the Computer Simulated Transport and Transformation Atmospheric Composition Processes over the Territory of Bulgaria. *Large-Scale Scientific Computations. LSSC 2023. Lecture Notes in Computer Science*, 13952, Springer, Cham., 2024, DOI:10.1007/978-3-031-56208-2_32, 316-324. SJR (Scopus):0.509.

Georgieva, I., Gadzhev, G., Ganey, K., Ivanov, V., Miloshev, N.. Evaluation of the Effects of the National Emission Reduction Strategies for Years 2020-2029 and After 2030 on the AQI on the Territory of Bulgaria. *Large-Scale Scientific Computations. LSSC 2023. Lecture Notes in Computer Science*, 13952, Springer, Cham., 2024, DOI:10.1007/978-3-031-56208-2_34, 335-342. SJR (Scopus):0.509.

Ivanov V., Dimitrova R., Georgieva I., Gadzhev G., Ganev K., Miloshev N.. Modelling of the heat and the cold risks in Sofia and Varna – preliminary results. Geostudies, 1, PenSoft, 2024, DOI:10.3897/geostudies.1.e113477, 43-57.

Ivanov V., Gadzhev G., Ganev K., Georgieva I.. Simulated renewable energy potential for future climates over the region of Southeastern Europe. Engineering Sciences, LXI, 2, Journal of the Bulgarian Academy of Sciences, 2024, ISSN:2603-3542, DOI: 10.7546/EngSci.LXI.24.02.08, 91-104.

Ivanov V., Georgieva I.. Impact of different processes on the air pollution over the Balkan peninsula. Proceedings of the 22th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes, 2024, ISBN:978-0000000000-2.

Ivanov, V., Gadzhev, G., Georgieva, I., Ganev, K., Miloshev., N.. Influence of the grid resolutions on the computer simulated air quality indices over the territory of Bulgaria. Large-Scale Scientific Computations. LSSC 2023. Lecture Notes in Computer Science, 13952, Springer, Cham., 2024, DOI:10.1007/978-3-031-56208-2_41, 404-411. SJR (Scopus):0.

Kostadin Ganev, Georgi Gadzhev, Ivelina Georgieva, Vladimir Ivanov, Nikolay Miloshev. Assessment of the national emission reduction strategies effects for Bulgaria (2020-2029 and after 2030) on surface FPRM and CPRM concentrations. GeoStudies, 73, 1, PenSoft, 2024, DOI:10.3897/geostudies.1.e109372, 1-10.

Plamen Mukhtarov, Rumiana Bojilova. Influence of Short-Term Variations in Solar Activity on Total Electron Content. Atmosphere, 15, 8, Multidisciplinary Digital Publishing Institute (MDPI), 2024, ISSN:2073-4433, DOI:https://doi.org/10.3390/atmos15080913, 913. SJR (Scopus):0.627, JCR-IF (Web of Science):2.5.

R. Bojilova, P. Mukhtarov. Ionospheric effects during annular solar eclipse on 14 October 2023. 12th Congress of the Balkan Geophysical Society, 2024, EAGE Publications BV, 2024, DOI:https://doi.org/10.3997/2214-4609.202149BGS46, 1-5.

Rumiana Bojilova, Plamen Mukhtarov, Dora Pancheva. Global Ionospheric Response During Extreme Geomagnetic Storm in May 2024. Remote Sensing, 16, 21, Multidisciplinary Digital Publishing Institute (MDPI), 2024, ISSN:2072-4292, DOI:https://doi.org/10.3390/rs16214046, 4046. SJR (Scopus):1.091, JCR-IF (Web of Science):4.2.

Rumiana Bojilova, Plamen Mukhtarov. Seasonal Features of the Ionospheric Total Electron Content Response at Low Latitudes during Three Selected Geomagnetic Storms. Atmosphere, 15, 3, Multidisciplinary Digital Publishing Institute (MDPI), 2024, ISSN:2073-4433, DOI:https://doi.org/10.3390/atmos15030278, 278. SJR (Scopus):0.627, JCR-IF (Web of Science):2.5.

Георги Гаджев, Владимир Иванов, Маргарита Георгиева, Георги Георгиев, Миглена Жиянски, Ели Павлова-Трайкова, Груд Попов, Веселка Гюлева-Пантова. Регионални/локални характеристики на климата на страната. Национална научна програма „Опазване на околната среда и намаляване на риска от неблагоприятни явления и природни бедствия“: Резултати и постижения., 2024, ISBN:978-619-7667-71-4, 9-39л

Dora Pancheva, Plamen Mukhtarov, Rumiana Bojilova. Climatology of the nonmigrating tides based on long-term SABER/TIMED measurements and their impact on the longitudinal structures observed in the ionosphere. Atmosphere, 15, 4, Multidisciplinary Digital Publishing Institute (MDPI), 2024, ISSN:2073-4433, DOI:<https://doi.org/10.3390/atmos15040478>, 478. SJR (Scopus):0.627л

Dora Pancheva, Plamen Mukhtarov, Rumiana Bojilova. Response to Geomagnetic Storm on 23-24 March 2023 Long-Lasting Longitudinal Variations of the Global Ionospheric TEC. Advances in Space Research, 73, 12, Elsevier, 2024, ISSN:Online ISSN: 1879-1948/Print ISSN: 0273-1177, DOI:<https://doi.org/10.1016/j.asr.2024.03.023>, 6006-6028. SJR (Scopus):0.599, JCR-IF (Web of Science):2.6л

Nanhong Xie, Tijian Wang, Xiaodong Xie, Xu Yue, Filippo Giorgi, Qian Zhang, Danyang Ma, Rong Song, Beiyao Xu, Shu Li, Bingliang Zhuang, Mengmeng Li, Min Xie, Natalya Andreeva Kilifarska, Georgi Gadzhev, Reneta Dimitrova. The regional climate–chemistry–ecology coupling model RegCM-Chem (v4.6)–YIBs (v1.0): development and application. Geoscientific Model Development, 17, European Geosciences Union, 2024, 3259-3277. SJR (Scopus):2.055л

Velizarova, M, Dimitrova, R., Hristov, P.O., Burov, A., Brezov, D., Hristova, E., Gueorguiev, O.. Evaluation of Emission Factors for Particulate Matter and NO₂ from Road Transport in Sofia, Bulgaria. Atmosphere, 15, 773, MDPI, 2024, DOI:[10.3390/atmos15070773](https://doi.org/10.3390/atmos15070773), 773. SJR (Scopus):0.627, JCR-IF (Web of Science):2.5.

2023

Bojilova R., Mukhtarov P.. Verification of the methodology for forecasting the ionosphere over Bulgaria in the conditions of the geomagnetic storm on 27 February 2023. Proceedings of Fifteenth Workshop “Solar Influences on the Magnetosphere, Ionosphere and Atmosphere”, SRTI - BAS, 2023, ISSN:2367-7570, DOI:[10.31401/WS.2023.proc](https://doi.org/10.31401/WS.2023.proc), 29-34.

Georgieva I., Gadzhev G., Ganев K., Ivanov V.. Evaluation of the Effects of the National Emission Reduction Strategies for Years 2020–2029 and After 2030 on the Sulphur and Nitrogen Wet and Dry Depositions on the Territory of Bulgaria. Proceedings of 2nd Conference Environmental Protection and Disaster Risks, Lecture Notes in Networks and Systems, 368, Springer, Cham., 2023, DOI:[10.1007/978-3-031-26754-3_22](https://doi.org/10.1007/978-3-031-26754-3_22), 249-259.

Ivanov V., Gadzhev G., Ganev K., Georgieva I.. Estimation of the Historical and Future Renewable Energy Potential with RegCM4 over the Region of Southeastern Europe. Proceedings of 2nd Conference Environmental Protection and Disaster Risks, Lecture Notes in Networks and Systems, 368, Springer, Cham., 2023, DOI:10.1007/978-3-031-26754-3_14, 160-169.

Petya Trifonova, Nikolay Miloshev, Liliya Dimitrova, Metodi Metodiev, Diana Jordanova, Daniel Ishlyamski. Earth observation capacity of the National Geoinformation center of Bulgaria as part of the tools for geo- and anthropogenic-hazard management in EPOS. Journal of Integrated Disaster Risk Management, IDRiM Society, 2023, ISSN:2185-8322, DOI:<https://doi.org/10.5595/001c.91239>, SJR (Scopus):0.16л

Plamen Mukhtarov, Nikolay Miloshev, Rumiana Bojilova. Stratospheric Warming Events in the Period January–March 2023 and Their Impact on Stratospheric Ozone in the Northern Hemisphere. Atmosphere, 14, 12, Multidisciplinary Digital Publishing Institute (MDPI), 2023, ISSN:2073-4433, DOI:<https://doi.org/10.3390/atmos14121762>, 1762. SJR (Scopus):0.63, JCR-IF (Web of Science):2.9л

Rumiana Bojilova, Plamen Mukhtarov, Nikolay Miloshev. Investigation of the dependence of ultraviolet radiation on the day. Environmental Protection and Disaster Risks. EnviroRISks 2022. Lecture Notes in Networks and Systems, vol 638, Springer, Cham, 2023, ISSN:ISSN 2367-3370 / E-ISSN 2367-3389, DOI:https://doi.org/10.1007/978-3-031-26754-3_16, 177-187. SJR (Scopus):0.17л

Rumiana Bojilova, Plamen Mukhtarov. An empirical median model for forecasting the height of the peak electron density of a mid-latitude ionospheric station. Сборник с доклади от 11-тата Национална конференция по геофизика, 2023, ISSN:1314-2518 (CD/DVD), DOI:<https://doi.org/10.48368/bgs-2023.1.N15>.

Rumiana Bojilova, Plamen Mukhtarov. Analysis of the Ionospheric Response to Sudden Stratospheric Warming and Geomagnetic Forcing over Europe during February and March 2023. Universe, 9, 8, Multidisciplinary Digital Publishing Institute (MDPI), 2023, ISSN:2218-1997, DOI:<https://doi.org/10.3390/universe9080351>, 351-366. SJR (Scopus):0.78, JCR-IF (Web of Science):2.9л

Rumiana Bojilova, Plamen Mukhtarov. Comparative Analysis of Global and Regional Ionospheric Responses during Two Geomagnetic Storms on 3 and 4 February 2022. Remote Sensing, 15, 7, Multidisciplinary Digital Publishing Institute (MDPI), 2023, ISSN:2072-4292, DOI:<https://doi.org/10.3390/rs15071739>, 1739-1761. SJR (Scopus):1.283, JCR-IF (Web of Science):5л

Rumiana Bojilova, Plamen Mukhtarov. Investigation of Dst variations in X component at mid-latitudes during three geomagnetic storms on February 2022. Proceedings of Science (PoS), 427, Sissa Medialab Srl, 2023, ISSN:18248039, DOI:<https://doi.org/10.22323/1.427.0185>, SJR (Scopus):0.115.

Rumiana Bojilova, Plamen Mukhtarov. Investigation of dst variations in X component at midlatitudes during geomagnetic storm on February 3, 2022. *Comptes rendus de l'Académie bulgare des Sciences*, 76, 2, Издателство на БАН "Проф. Марин Дринов", 2023, ISSN:1310–1331 (Print)/ (Online) 2367–5535, DOI:10.7546/CRABS.2023.02.11, 264-272. SJR (Scopus):0.18, JCR-IF (Web of Science):0.3.

Rumiana Bojilova, Plamen Mukhtarov. Preliminary results of methodology for forecasting the minimum virtual height of ionospheric f-region for Sofia city. *Comptes rendus de l'Académie bulgare des Sciences*, 76, 12, Издателство на БАН "Проф. Марин Дринов", 2023, ISSN:1310–1331 / (Online) 2367–5535, DOI:10.7546/CRABS.2023.12.08, 1860-1867. SJR (Scopus):0.182, JCR-IF (Web of Science):0.3.

Belev G., Ivanova-Radovanova P., Ivanov V., Chervenkov H.. Climate Change Implications on the Condition of the Road Surface in Bulgaria. *Environmental Protection and Disaster Risks. EnviroRISks 2022. Lecture Notes in Networks and Systems*, 638, Springer, Cham., 2023, DOI:10.1007/978-3-031-26754-3_9, 100-109. SJR (Scopus):0.151.

Dzhambov, Angel M, Dikova, Krasimira, Georgieva, Tzveta, Mukhtarov, Plamen, Dimitrova, Reneta. Time Series Analysis of Asthma Hospital Admissions and Air Quality in Sofia – A Pilot Study. *Lecture Notes in Networks and Systems*, 638 LNNS, Springer Science and Business Media Deutschland GmbH, 2023, ISBN:978-303126753-6, ISSN:23673370, DOI:10.1007/978-3-031-26754-3_17, 191-202. SJR (Scopus):0.151.

Dzhambov, Angel M., Dikova, Krasimira, Georgieva, Tzveta, Panev, Teodor I., Mukhtarov, Plamen, Dimitrova, Reneta. Short-term effects of air pollution on hospital admissions for cardiovascular diseases and diabetes mellitus in Sofia, Bulgaria (2009–2018). *Arhiv za Higijenu Rada i Toksikologiju*, 74, 1, Institute for Medical Research and Occupational Health, 2023, ISSN:00041254, DOI:10.2478/aiht-2023-74-3704, 48-60. SJR (Scopus):0.334, JCR-IF (Web of Science):0.37.

Dzhambov, Angel, Dimitrova, Veronika, Germanova, Nevena, Burov, Angel, Brezov, Danail, Hlebarov, Ivaylo, Dimitrova, Reneta. Joint associations and pathways from greenspace, traffic-related air pollution, and noise to poor self-rated general health: A population-based study in Sofia, Bulgaria. *Environmental Research*, 231, Academic Press Inc., 2023, DOI:10.1016/j.envres.2023.116087, JCR-IF (Web of Science):8.32.

Pancheva, Dora, Mukhtarov, Plamen. Climatology and interannual variability of the migrating quarterdiurnal tide (QW4) seen in the SABER/TIMED temperatures (2002–2022). *Journal of atmospheric and solar-terrestrial Physics*, 250, 106111, Pergamon-Elsevier science LTD, 2023, ISSN:13646826, DOI: 10.1016/j.jastp.2023.106111, JCR-IF (Web of Science):0.51.

Tsakovski, Stefan, Danchevski, Ventsislav, Dimitrova, Reneta, Mukhtarov, Plamen. Multivariate Statistical Modelling of Urban Air-Quality. Lecture Notes in Networks and Systems, 638 LNNS, Springer Science and Business Media Deutschland GmbH, 2023, DOI:10.1007/978-3-031-26754-3_19, 216-222. SJR (Scopus):0.151.

Velizarova, Margret, Dimitrova, Reneta. Impact of Regulatory Measures on Pollutants Concentration in Urban Street Canyon – A Pilot Study. Lecture Notes in Networks and Systems, 638 LNNS, Springer Science and Business Media Deutschland GmbH, 2023, ISBN:978-303126753-6, ISSN:23673370, DOI:10.1007/978-3-031-26754-3_18, 203-215. SJR (Scopus):0.151.