

2025

Maria Chamati, Mariya Popova. Environmental impact of the 7 June 2023 moderate earthquake in Plovdiv and Asenovgrad area, Bulgaria.. Lecture Notes in Networks and Systems, 883, Springer Nature, 2025, ISSN:2367-3389, DOI:https://doi.org/10.1007/978-3-031-74707-6_6, 44-52.

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.

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'Acad´emie 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.

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.

2024

Rumiana Bojilova. First results for influence of two geomagnetic storms during 10-12 may 2024 on mid-latitude ionosphere. Comptes rendus de l'Acad´emie bulgare des Sciences, 77, 10, Издателство на БАН " Проф. Марин Дринов", 2024, ISSN:1310–1331(Print) / (Online) 2367–5535, DOI:<https://doi.org/10.7546/CRABS.2024.10.08>, 1485-1492.

Guineva V., Werner R., Bojilova R., Raykova L., Atanassov A., Valev D.. Analysis of Substorms Related to Strong MPB at Panagjurishte Station in 2022. Proceedings of Fifteenth Workshop "Solar Influences on the Magnetosphere, Ionosphere and Atmosphere", SRTI - BAS, 2024, ISSN:2367-7570, DOI:10.31401/WS.2024.proc, 56-63

V. Guineva, R. Werner, R. Bojilova, L. Raykova, A. Atanassov, D. Valev. A methodology to estimate the MPB parameters. Proceedings of the XLVII Annual Seminar "Physics of Auroral Phenomena", Apatity, Russia, Polar Geophysical Institute RAS, 2024, ISSN:2588-0039, DOI:10.51981/2588-0039.2024.47.003, 16-19.

Veneta Guineva, Rolf Werner, Rumiana Bojilova, Lyubomira Raykova, Atanas Atanassov, Dimitar Valev. Study of the midlatitude positive bays at the magnetic station Panagyurishte during the descending phase of solar cycle 24. Proceedings of the Twentieth anniversary international scientific conferences 2024, Space, ecology, safety –SES'2024: Proceedings of Annual International Scientific

Conference. – Sofia: Bulg. Acad. of Sciences, Space Research and Technology Inst., 2024, ISSN:p-ISSN 2603 – 3313 / e-ISSN 2603 – 3321, 48-54.

Zbyšek Mošna, Veronika Barta, Kitty Alexandra Berényi, Jens Mielich, Tobias Verhulst, Daniel Kouba, Jaroslav Urbář, Jaroslav Chum, Petra Koucká Knížová, Habtamu Marew, Kateřina Podolská, Rumiana Bojilova. The March and April 2023 ionospheric storms in the period of the Solar Cycle 25. *Frontiers in Astronomy and Space Sciences*, 11, Frontiers Media SA, 2024, ISSN:2296987X, DOI:<https://doi.org/10.3389/fspas.2024.1462160>, 1462160.

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.

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.

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.

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.

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.

R. Bojilova, M. Atanasova. Ionospheric Co-Seismic Effects after MW 5.9 Earthquake in Greece on 29 March 2024. 12th Congress of the Balkan Geophysical Society, 2024, EAGE Publications BV, 2024, DOI:<https://doi.org/10.3997/2214-4609.202449BGS5>, 1-5.

Rumiana Bojilova, Mila Atanasova. Post-seismic ionosphere effects after croatian mw 6.4 earthquake on December 29, 2020. *Comptes rendus de l'Académie bulgare des Sciences*, 77, 5, Издателство на БАН "Проф. Марин Дринов", 2024, ISSN:1310–1331(Print) / (Online) 2367–5535, DOI:<https://doi.org/10.7546/CRABS.2024.05.08>, 707-714.

Maria Chamati. Disturbances in the geomagnetic field recorded on February 6, 2023. Proceedings of the XI National Geophysical Conference, June 9, 2023, Sofia, Bulgaria, 2023, ISSN:1314-2518, DOI:<https://doi.org/10.48368/bgs-2023.1.N3>.

Maria Chamati. The geomagnetic storm on march 13-14, 2022: Spectral characteristics in ultra-low frequency range. 23rd International Multidisciplinary Scientific GeoConference SGEM 2023, 23, 1.1, 2023, ISBN:978-619-7603-56-9, ISSN:1314-2704, DOI:10.5593/sgem2023/1.1/s05.73, 609-616. SJR (Scopus):0.123.

Guineva V.H., Werner R., Atanassov A.M., Bojilova R. Ts., Raykova L.N., Valev D.T.. Determination of the parameters of midlatitude positive bays caused by magnetospheric substorms. Proceedings of Fifteenth Workshop "Solar Influences on the Magnetosphere, Ionosphere and Atmosphere", SRTI - BAS, 2023, ISSN:2367-7570, DOI:10.31401/WS.2023.proc, 47-54.

Potužníková K., Koucká Knížová P., Chum J., Podolská K., Kouba D., Mošna Z., Georgieva, K., Bojilova, R.. Summer tropospheric mesoscale situations with impact on the ionospheric plasma. Proceedings of Fifteenth Workshop "Solar Influences on the Magnetosphere, Ionosphere and Atmosphere", SRTI - BAS, 2023, ISSN:2367-7570, DOI:10.31401/WS.2023.proc, 80-89.

R. Werner, V. Guineva, I. Despirak, A. Lyubchich, R. Bojilova, L. Raykova, A. Atanassov, D. Valev. Determination of the occurrence rates of the geomagnetic disturbances at European auroral and high latitudes. Proceedings of the XLVI Annual Seminar "Physics of Auroral Phenomena", Apatity, Russia, Polar Geophysical Institute RAS, 2023, ISSN:2588-0039, DOI:10.51981/2588-0039.2023.46.007, 34-37.

R. Werner, V. Guineva, I. V. Despirak, A. A. Lubchich, P. V. Setsko, A. Atanassov, R. Bojilova, L. Raykova, D. Valev. Statistical Studies of Auroral Activity and Perturbations of the Geomagnetic Field at Middle Latitudes. Geomagnetism and Aeronomy, 63, 4, Springer, 2023, ISSN:0016-7932, DOI:<https://doi.org/10.1134/S0016793223600303>, 473-485.

Rolf Werner, Boyan Petkov, Veneta Guineva, Andrey Kirillov, Atanas Atanassov, Rumiana Bojilova, Dimitar Valev, Lyubomira Raykova. Verification of the Long-Term Stability of Ozone Measurements with the GUV 2511 Instrument in Stara Zagora. Proceedings of the Nineteenth International Scientific conference SES2023, SPACE, ECOLOGY, SAFETY –SES'2023: Proceedings of Annual International Scientific Conference. – Sofia: Bulg. Acad. of Sciences, Space Research and Technology Inst., 2023, ISSN:p-ISSN 2603 – 3313 / e-ISSN 2603 – 3321, 57-62.

Rolf Werner, Veneta Guineva, Irina Despirak, Andris Lyubchich, Rumiana Bojilova, Lyubomira Raykova, Atanas Atanassov, Dimitar Valev. Statistical study of geomagnetic disturbances at European auroral and high latitudes. Comptes rendus de l'Académie bulgare des Sciences, 76, 4, Издателство на БАН "Проф. Марин Дринов", 2023, ISSN:1310–1331 / (Online) 2367–5535, DOI:10.7546/CRABS.2023.04.09, 571-579.

V. Guineva, R. Werner, R. Bojilova, A. Atanasov, L. Raykova, D. Valev. Spatial distribution of the magnetic disturbances at European midlatitudes during substorms: case study. Proceedings of Science (PoS), 427, Sissa Medialab Srl, 2023, ISSN:18248039, DOI:<https://doi.org/10.22323/1.427.0188>.

V. Guineva, R. Werner, I. Despirak, N. Klejmenova, A. Lubchich, P. Setsko, A. Atanasov, R. Bojilova, L. Raykova, D. Valev. Basic results from the project "Investigation of the geomagnetic disturbances propagation to mid-latitudes and their interplanetary drivers identification for the development of mid-latitude space weather forecast". Proceedings of the XLVI Annual Seminar "Physics of Auroral Phenomena", Apatity, Russia, Polar Geophysical Institute RAS, 2023, ISSN:2588-0039, DOI:10.51981/2588-0039.2023.46.005, 23-29=

Veneta Guineva, Rolf Werner, Irina Despirak, Natalya Klejmenova, Andris Lubchich, P. Setsko, Atanas Atanasov, Rumiana Bojilova, Lyubomira Raykova, Dimitar Valev. Results from the Bulgarian-Russian project on investigation of the geomagnetic disturbances propagation to mid-latitudes and their interplanetary driver's identification for the development of mid-latitude space weather forecast. Proceedings of the Nineteenth International Scientific conference SES2023, SPACE, ECOLOGY, SAFETY –SES'2023: Proceedings of Annual International Scientific Conference. – Sofia: Bulg. Acad. of Sciences, Space Research and Technology Inst., 2023, ISSN:p-ISSN 2603 – 3313 / e-ISSN 2603 – 3321, 47-56.

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, 29-34.

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.

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: 2367-3370 / E-ISSN 2367-3389, DOI: https://doi.org/10.1007/978-3-031-26754-3_16, 177-187.

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.

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.

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>.

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.

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.