**MPB at the Bulgarian station Panagyurishte related to substorms during highly disturbed conditions in 2024**

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Substorms originated over Europe are often accompanied by midlatitude positive bays (MPB) which can be registered at the midlatitude Bulgarian station Panagyurishte (PAG, GMLAT~ 37°N). In previous studies, it was found out, that the most intense MPB at PAG were related to substorms, originated during geomagnetic storms, under disturbed interplanetary conditions. 2024 is full of high-activity events resulting from the conditions in the solar wind and the interplanetary magnetic field. On 10-11 May 2024 developed a superstorm, the second largest geomagnetic storm in the space era, which influenced a lot the Geosphere. In addition, many more geomagnetic storms were observed during the year. The purpose of this work is to verify the MPB at PAG during such events. We studied the MPB’s during the superstorm on 10-11 May 2024, during the severe storm on 10 October 2024, and during the strong storms on 19 April 2024, 12 September 2024, 06 October 2024, 8 November 2024.

In 2024, 144 MPB were detected. It was ascertained, that the distribution of MPB’s by intensity in 2024 differ from the previous years. The number of MPB’s with higher maxima is higher: the number of cases with Xmax>20 nT is 6.94%, and with Xmax>30 nT – 5.56%. The highest maximal MPB values were over 60 nT and were observed during the geomagnetic superstorm.