**STATISTICAL ANALYSIS GEOMAGNETIC STORM AND AURORAL PHENOMENA**

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One sign of geomagnetic activity or geomagnetic storms is the aurora. With the rise in geomagnetic activity, the aurora will get brighter, more active, and travel farther from the poles. This is because the solar wind will accelerate, and the interplanetary magnetic field it is entangled in will migrate southward. N. G. Ptitsyna et. al. (2018) Recent data on geomagnetic and auroral activity has helped better comprehend solar-terrestrial dynamics. R. N. Boroyev et.al. (2023). The relationship of auroral activity indices (AE, Kp) with geomagnetic parameters (Dst) throughout a century, i.e., the solar cycle 15–24, is analysed statistically. The aim of this research is to investigate the relationships between geomagnetic storm (Dst) and auroral activity (AE, Kp) intensities in order to better understand the connection of auroral activity with geomagnetic and solar activity.