



## **A study of the effects of thunderstorm distance and topography on the atmospheric electric field**

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The atmospheric electric field, though not measured as routinely as other meteorological variables, can be utilized in a variety of applications, including that of approaching or developing thunderstorms recognition. In the current work, the operational active radius of an electric field mill located at the boundary between a valley and a mountain range is evaluated for such use, using also lightning location data from the ZEUS network. The active radius of the electric field mill was around 15 km for the mountain range, while for the valley region it increased to about 30 km. The potential gradient (PG) declined exponentially as distance to thunderclouds increased. The PG response to approaching charged clouds was also studied using the most severe thunderstorm of the study period as a test case.