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## **Analysis of time variations in the Global Electric Circuit parameters from the EGATEC model and Świder atmospheric electricity data**

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The ground-level potential gradient (PG) or the atmospheric electric field, the air-Earth current density as well as the main Global Electric Circuit (GEC) parameters such as the ionospheric potential, global resistance and the total current, can be obtained from the EGATEC engineering model of the GEC (Odzimek et al. 2010) at the resolution of 3 hours. The model input data based on satellite cloud and lightning observation datasets from the period 1998-2006 for evaluating the activity of the GEC cloud generators, and the summer/winter and low/high solar activity conductivity model of Tinsley and Zhou (2006) allow calculating the GEC parameters in the summers and winters of the period. In this work we compare the modelling results to observations from the Stanislaw Kalinowski Geophysical Observatory in Świder, Poland (52°07' N, 21°14' E) of the ground-level potential gradient and conduction current density calculated from the newly digitised PG and positive conductivity data from 1965-2005. We also look for connections in the time variations of the model meteorological input and atmospheric electricity observational data. The work is supported by the Polish National Science Centre grant no 2021/41/B/ST10/04448.