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## Ground-level atmospheric electricity of mid-latitude Nimbostratus and Stratus cloud at Swider station, Poland

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We present main results of our analysis of the ground-level atmospheric electricity under Nimbostratus and Stratus clouds at mid-latitude Geophysical Observatory in Swider. Atmospheric electricity data from the Geophysical Observatory in Swider was analysed according to the calculation scheme allowing to obtain the main components of the current density in such conditions, i.e. conduction current density and precipitation or convection current, based on the basic measured parameters: electric field, Maxwell current density and total air conductivity. The atmospheric electric field and conduction current is more likely downward under Stratus cloud as is the precipitation or convection current. The electric field under Nimbostratus during snow at the ground is downward and during rain is upward and sometimes also upward precipitation current occurs during heavier rain. Mean values of electric field, conductivity, conduction and precipitation current have been obtained and an average mean current budget was calculated. Another analysis concerns the dependence of precipitation current density on the electric field at the Earth's surface in the conditions of Nimbostratus with continuous, stable precipitation, in historical cases reported as linear. The dependence of the linear regression coefficients on the value of electrical conductivity of the air was particularly investigated from the angle of the theoretical results of the work of Ette and Oladiran (1980).