

**REGRESSION EQUATIONS OF NON-INDUCTIVE
CHARGE TRANSFER BASED ON LABORATORY DATA
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Set of empirical equations for the sign and magnitude of charge transfer at non-inductive rebounding collisions of ice crystal and graupel were obtained using stepwise regression analyses. The original source of data was Takahashi's laboratory experiment [1], who presented measured charge transfer values as isolines, function of cloud temperature and liquid water content. Several independent variables, which may be calculated in numerical cloud model, were tested together with liquid water content and cloud temperature. The best fit of calculated to the measured values of charge transfer was obtained by the use of four regression equations, depending of the range of changes of the graupel rime accretion rate. The analyses showed that the presented empirical equations could be used for the parameterisation of non-inductive charging mechanism in numerical model of thunderstorm.

Keywords: non-inductive charge in clouds, stepwise regression analyses, numerical model of thunderstorm.

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