



Vertical distribution of aerosol number concentration in the troposphere over Siberia derived from airborne in-situ measurements

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Knowledge of the vertical distribution of aerosols particles is very important when estimating aerosol radiative effects. To date there are a lot of research programs aimed to study aerosol vertical distribution, but only a few ones exist in such insufficiently explored region as Siberia. Monthly research flights and several extensive airborne campaigns carried out in recent years in Siberian troposphere allowed the vertical distribution of aerosol number concentration to be summarized. In-situ aerosol measurements were performed in a wide range of particle sizes by means of improved version of the Novosibirsk-type diffusional particle sizer and GRIMM aerosol spectrometer Model 1.109. The data on aerosol vertical distribution enabled input parameters for the empirical equation of Jaenicke (1993) to be derived for Siberian troposphere up to 7 km. Vertical distributions of aerosol number concentration in different size ranges averaged for the main seasons of the year will be presented.

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