



## Seasonal variability of particulate organic matter sampled in the free troposphere over south-western part of Siberia

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The annual behavior of the concentration of components of atmospheric particulate organic matter sampled in the atmospheric layer from 500 to 8500 m is discussed. Compounds ranging from  $C_8H_{18}$  to  $C_{35}H_{72}$  were detected in the composition of aerosol particles. The identified part of organic aerosols showed a distinct seasonal pattern with a maximum in spring and a minimum during autumn.

The range of hydrocarbons is the widest during the winter period ( $C_{12}H_{26}$ – $C_{35}H_{72}$ ) and during spring ( $C_8H_{18}$ – $C_{31}H_{64}$ ), and it is markedly narrower during summer ( $C_{18}H_{38}$ – $C_{33}H_{68}$ ) and during autumn ( $C_{16}H_{34}$ – $C_{31}H_{64}$ ). One mode (*n*-alkane  $C_{20}H_{42}$ ) predominates in aerosol composition throughout the year. A secondary maximum, corresponding to *n*-alkane  $C_{29}H_{60}$ , appears during the summer period and, possibly, caused by forest fires

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