

## Publication

# On coarse patterns in the atmospheric concentration of ice nucleating particles

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The atmospheric concentration of ice nucleating particles active at around-10 degrees C (INP-10) is very low. Nevertheless, these particles play a role in the development of cloud systems, so their spatial and temporal patterns merit attention. We collated available datasets on INP-10 to identify such patterns. Among the five low altitude observatories in northern Eurasia, median values throughout May to October were lowest in Scandinavia (4 and 6 m-3), somewhat higher in central Europe (11 m-3), substantially higher in the West Siberian Plain (69 m-3) and highest in the Central Yakutian Lowland (204 m-3), suggesting that the abundance of INP-10 in northern Eurasia may increase with continentality and from West to East. The range of values at the same observatories was narrower throughout November to April (2 to 27 m-3). On average, by an order of magnitude smaller values were reported for the four Arctic observatories. Consequently, increasing poleward transport of air masses from the midlatitudes likely raises the concentration of INP-10 in the Arctic, particularly when air masses had surface contact in eastern parts of northern Eurasia.

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