

Publication

Low number concentration of ice nucleating particles in an aged smoke plume

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Author(s) Conen, Franz; Bukowiecki, Nicolas; Gysel, Martin; Steinbacher, Martin; Fischer, Andrea; Reimann, Stefan

Author(s) at UniBasel [Bukowiecki, Nicolas](#) ; [Conen, Franz](#) ;

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Smoke from forest fires in the western part of North America reached the High Altitude Research Station Jungfrauoch, Switzerland, at the beginning of September 2017. Number concentration of ice nucleating particles (INPs) active at -15 degrees C or warmer decreased by about half during its passage. This is different to observations of enhanced INP concentrations in fresh plumes from forest fires. We hypothesise that INPs initially present in a smoke plume are lost or deactivated during long-range transport, while components of smoke capable of deactivating INPs originally present or mixed later into the plume continue to remain active across a longer distance.

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