



Supplement of

New particle formation in the Svalbard region 2006–2015

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New particle formation events, (NPF-events), of the type DGR, i.e. events that are characterized by a systematic growth of particles below 50 nm diameter, were analyzed according to the protocol formulated in Kulmala et al. (2012). In the two instrumentally limited size ranges five to 25 nm and 10 to 50 nm the two particle formation rates J_{11} and J_{22} , ($\text{cm}^{-3}\text{s}^{-1}$), and the two growth rates GR_{11} , and GR_{22} , (nmh^{-1}), at the respective geometric mean diameters were calculated.

In order to explore a possible relationship between particle formation rates and growth rates resulting from the availability of condensing vapors we present in Fig. S1 a scatter-plot of the formation rates as a function of the ratio of condensation sink CS , (s^{-1}) to the respective growth rate.

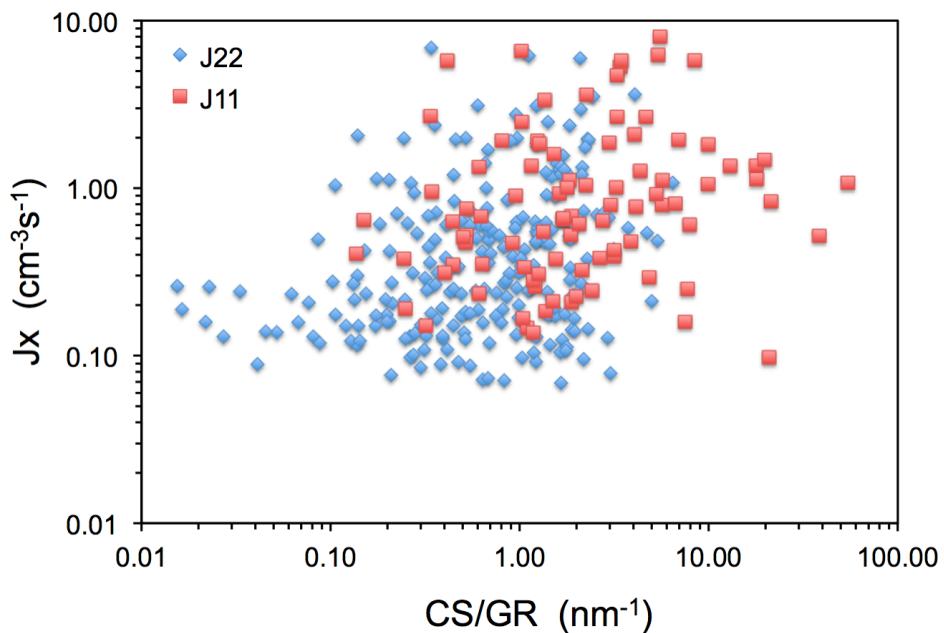


Figure S1 Particle formation rates J_{11} , and J_{22} , ($\text{cm}^{-3}\text{s}^{-1}$), as a function of the ratio condensation sink CS , (s^{-1}) to the growth rate GR_{11} , and GR_{22} , respectively.

Kulmala, M., Petäjä, T., Nieminen, T., Sipilä, M., Manninen, H. E., Lehtipalo, K., Dal Maso, M., Aalto, P. P., Junninen, H., Paasonen, P., Riipinen, I., Lehtinen, K. E. J., Laaksonen, A., and Kerminen, V.-M.: Measurement of the nucleation of atmospheric aerosol particles, Nat. Protocols, 7, 1651-1667, <http://www.nature.com/nprot/journal/v7/n9/abs/nprot.2012.091.html - supplementary-information>, 2012.