

Supplement of Atmos. Chem. Phys., 17, 6153–6175, 2017
<http://www.atmos-chem-phys.net/17/6153/2017/>
doi:10.5194/acp-17-6153-2017-supplement
© Author(s) 2017. CC Attribution 3.0 License.



Atmospheric
Chemistry
and Physics
Open Access
EGU

Supplement of

New particle formation in the Svalbard region 2006–2015

Jost Heintzenberg et al.

Correspondence to: Jost Heintzenberg (jost@tropos.de)

The copyright of individual parts of the supplement might differ from the CC-BY 3.0 licence.

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 J11 and J22, ($\text{cm}^{-3}\text{s}^{-1}$), and the two growth rates GR11, and GR22, (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.

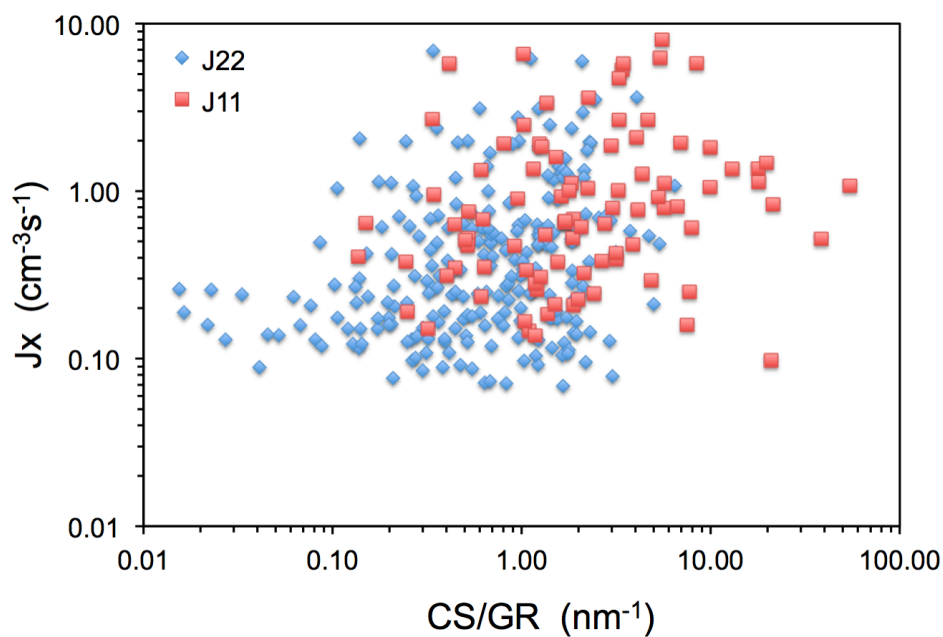


Figure S1 Particle formation rates J11, and J22, ($\text{cm}^{-3}\text{s}^{-1}$), as a function of the ratio condensation sink CS, (s^{-1}) to the growth rate GR11, and GR22, respectively.

Literature

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.