

*[JGR - Atmospheres]*

Supporting Information for

**Analysis of long-term aerosol size distribution data from Jungfrauoch with emphasis on free tropospheric conditions, cloud influence, and air mass transport**

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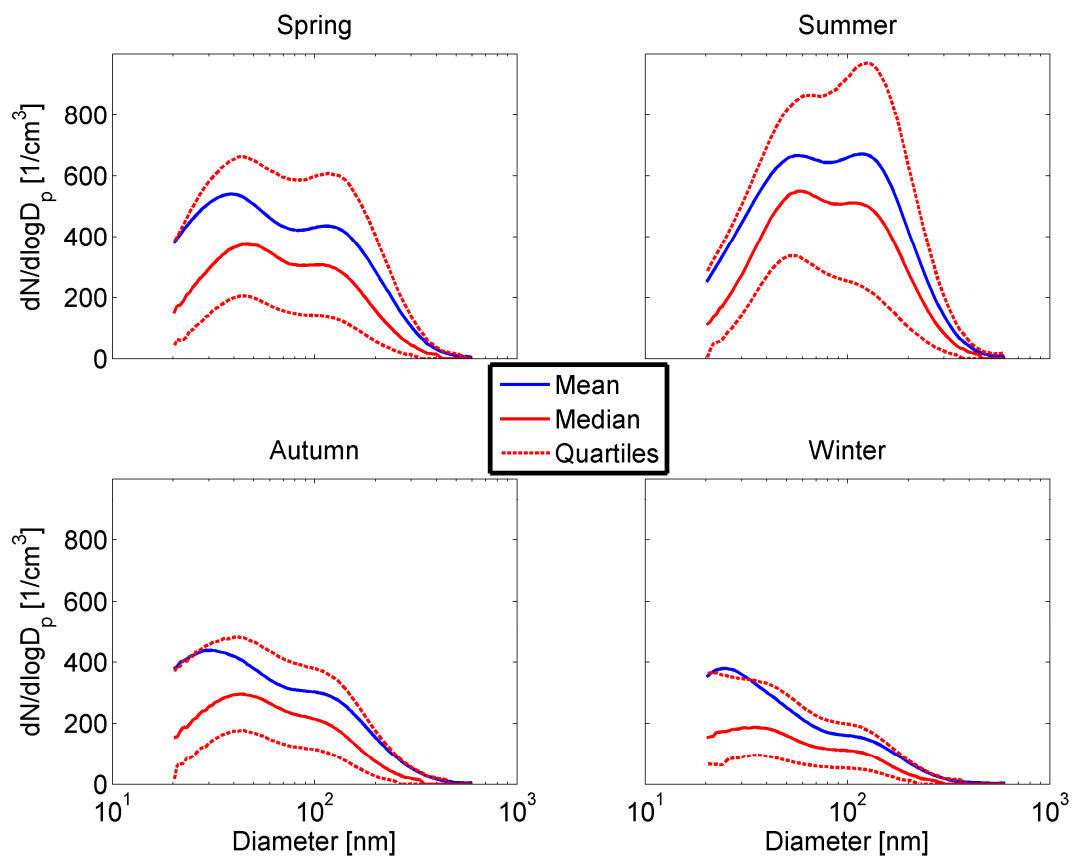
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## **Contents of this file**

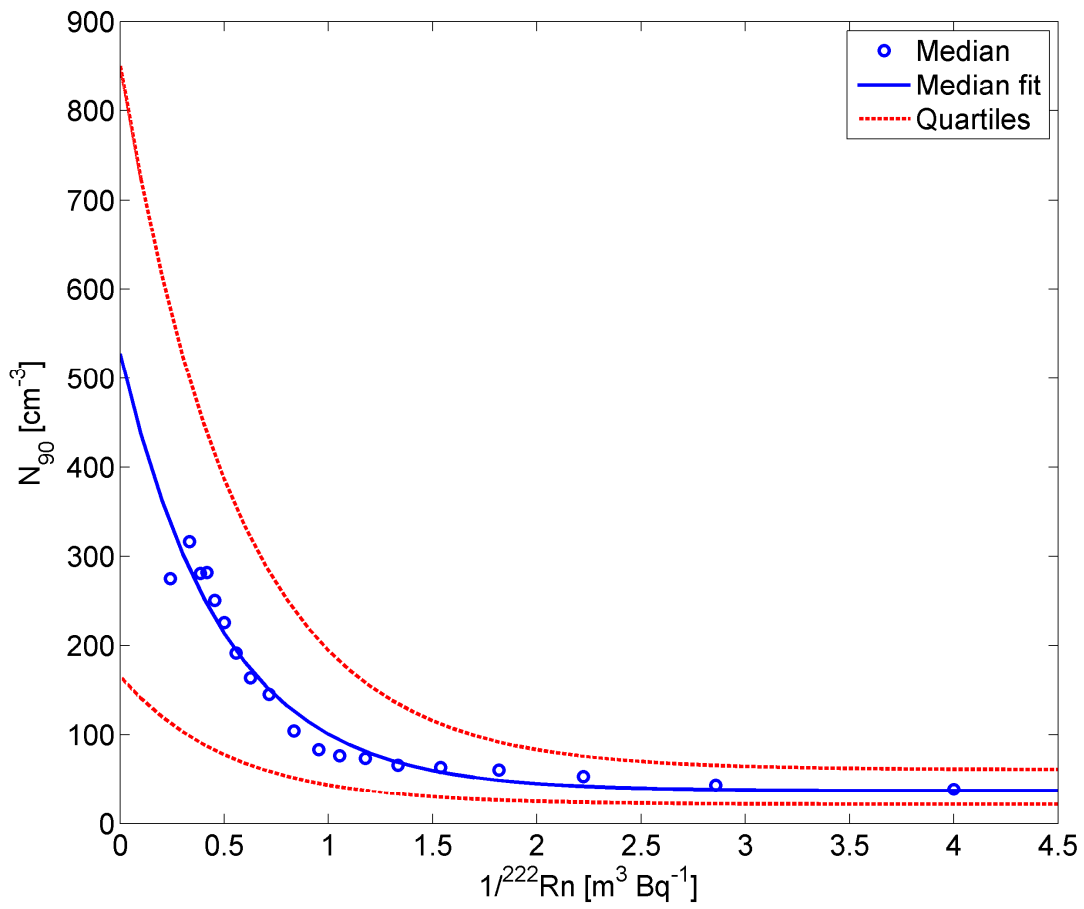
Figures S1 to S4

## **Introduction**

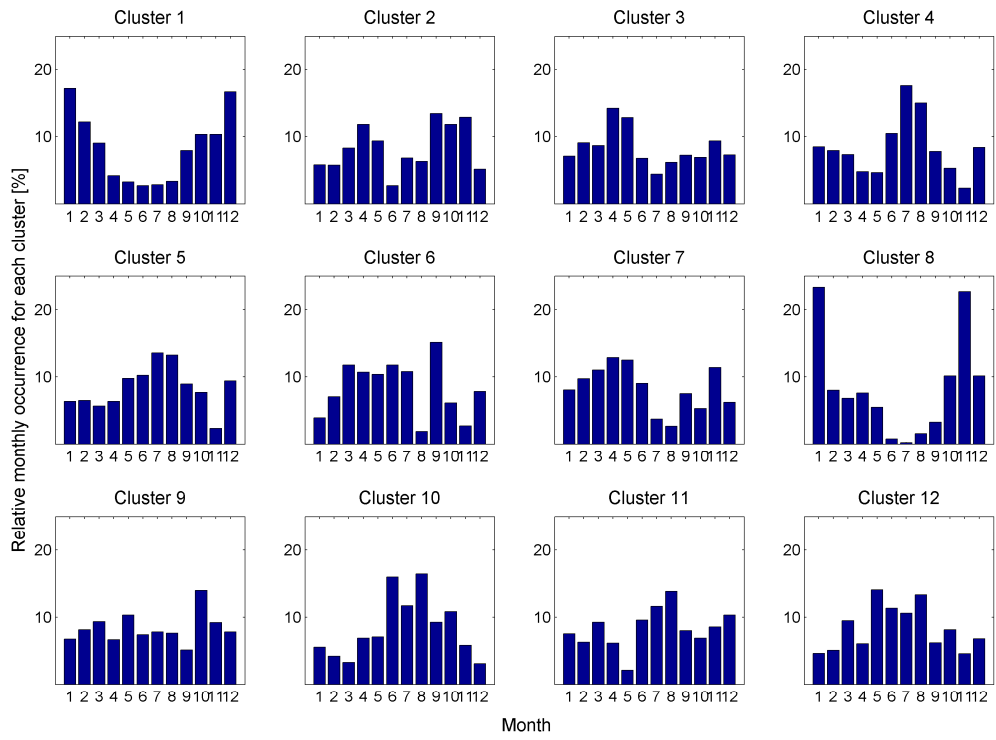
This file contains some non-essential but helpful figures that have been omitted from the manuscript proper to avoid unnecessary “sprawl”.



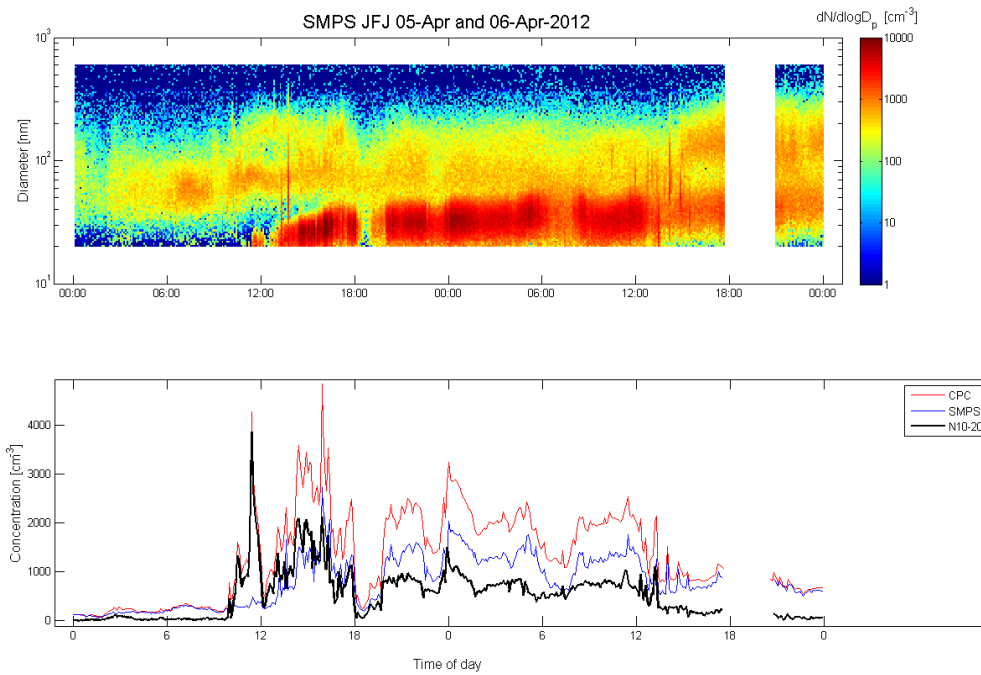
**Figure S1.** Mean, median, and quartiles of the size distribution for each season.



**Figure S2.**  $N_{90}$  as a function of  $1/[^{222}\text{Rn}]$  with fit and quartiles as in Figures 6a and 6b. For the tropospheric  $N_{90}$  background, this approach yields a value of  $36.5 \text{ cm}^{-3}$ .



**Figure S3.** Annual cycles of footprint cluster occurrence. Sum for each cluster is 100%.



**Figure S4.** An example of particle growth arrested in the Aitken mode. Note that the figure shows two consecutive days.