Figure S1. Monthly frequency of occurrence of NPF events at the 5 studied sites excluding months with less than 30% of the data coverage.

5
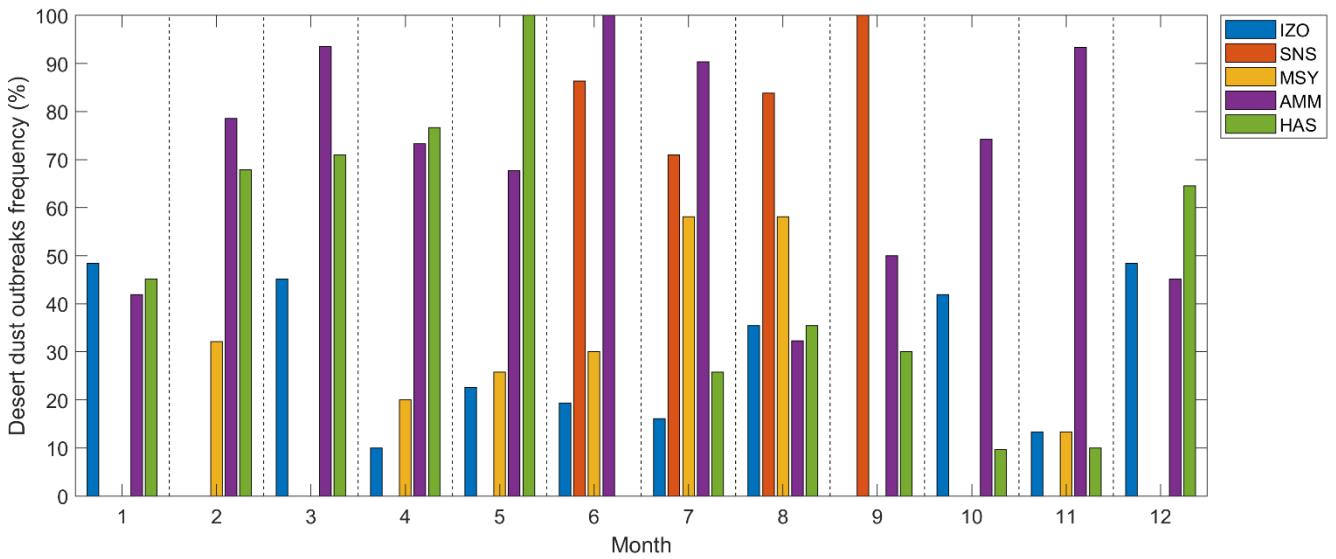
Figure S2. Monthly frequency of occurrence of desert dust outbreaks at the 5 studied sites.
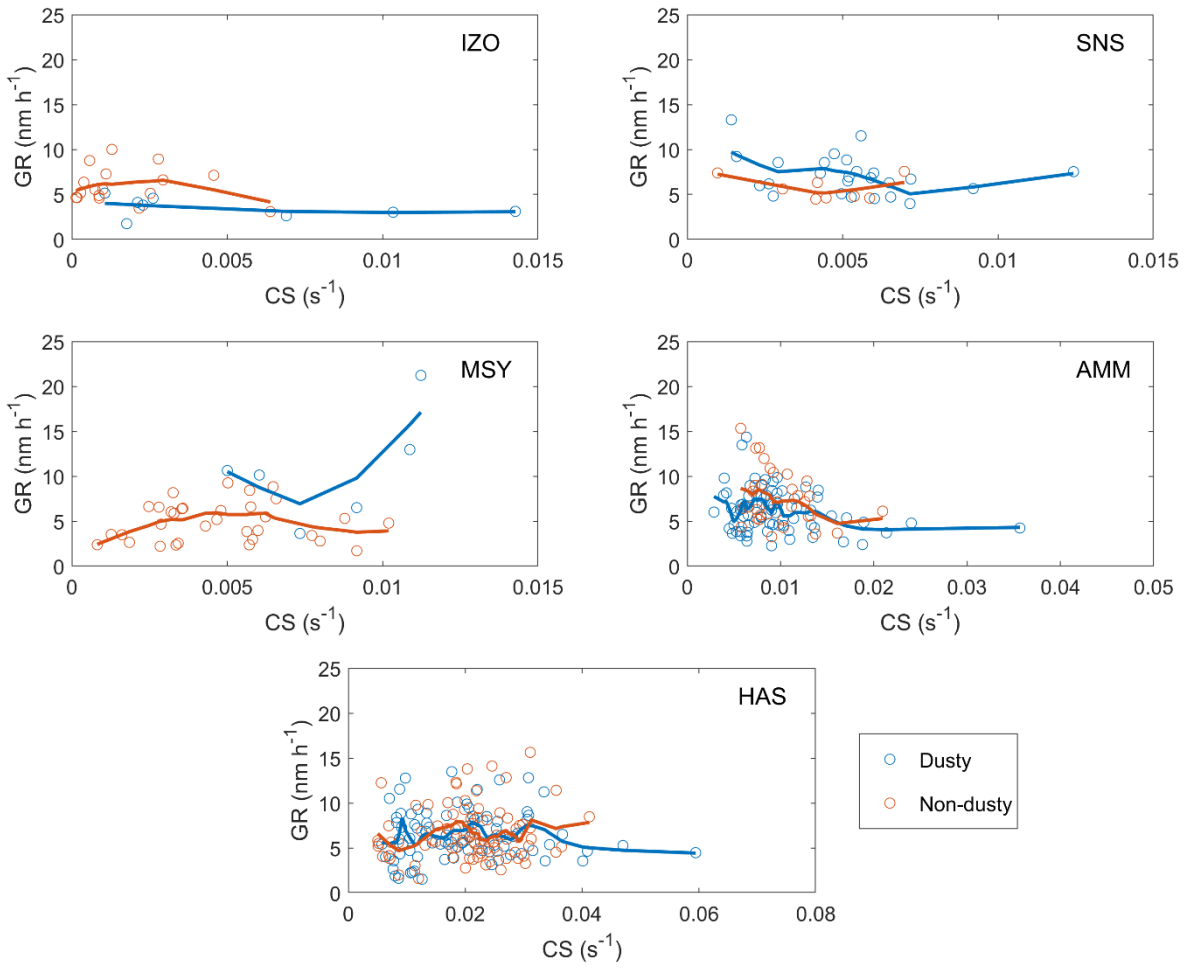
Figure S3. Particle growth rate (GR) during class I events as function of condensation sink (CS) during dusty and non-dusty conditions at each measurement stations. The lines represent the moving average for dusty and non-dusty conditions.
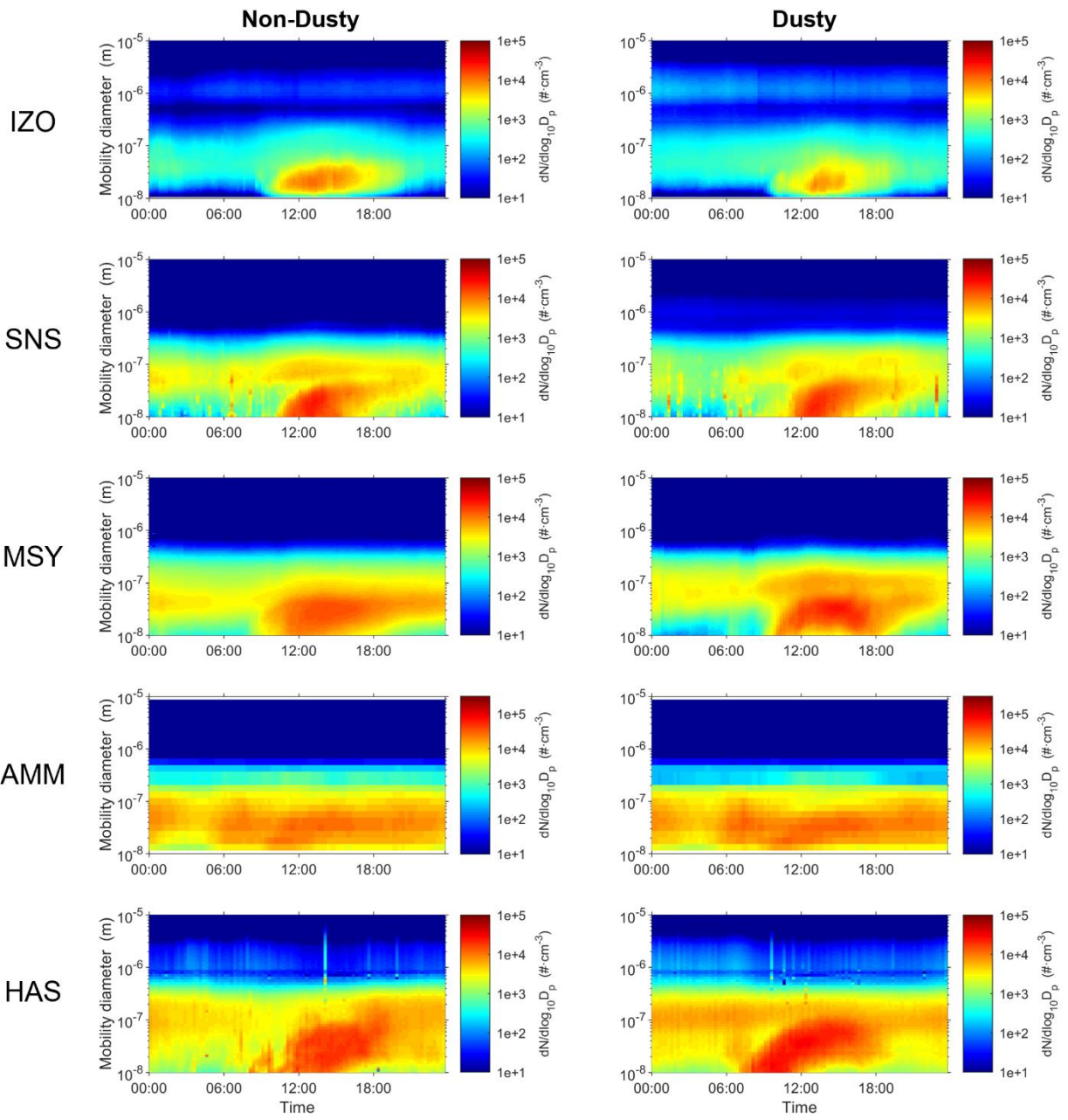
Figure S4. Daily mean pattern of particle number size distribution during class I NPF events on non-dusty (left) and dusty (right) conditions at the 5 studied sites.
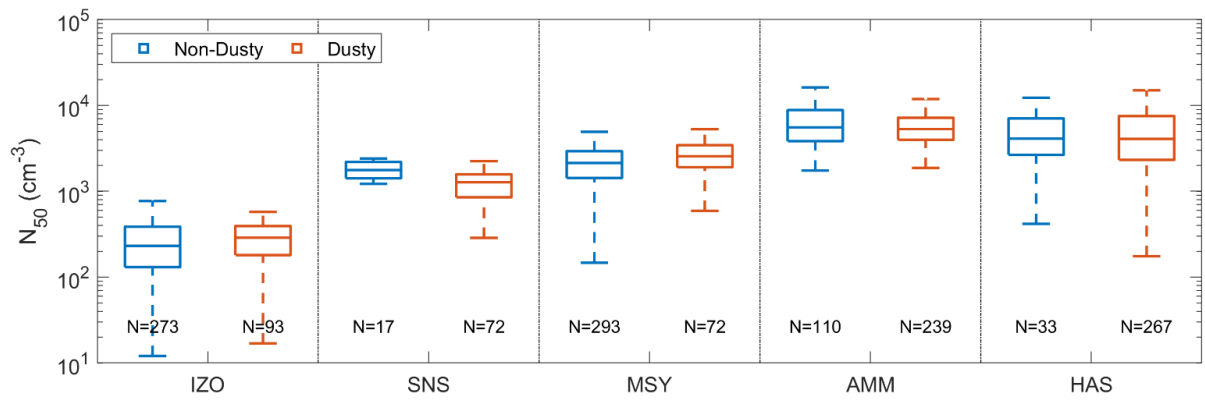
Figure S5. Box and whisker plot of N_{50} recorded at each measurement site during non-dusty and dusty conditions days. The line represents the median of the data and the lower and upper edges of the box represent the 25th and 75th percentiles of the data, respectively. The length of the whiskers represents the 1.5× interquartile range, which includes 99.3 % of the data. N represents the total number of days for each condition.