



Supplement of

Characterization of aerosol number size distributions and their effect on cloud properties at Syowa Station, Antarctica

Keiichiro Hara et al.

Correspondence to: Keiichiro Hara (harakei@fukuoka-u.ac.jp)

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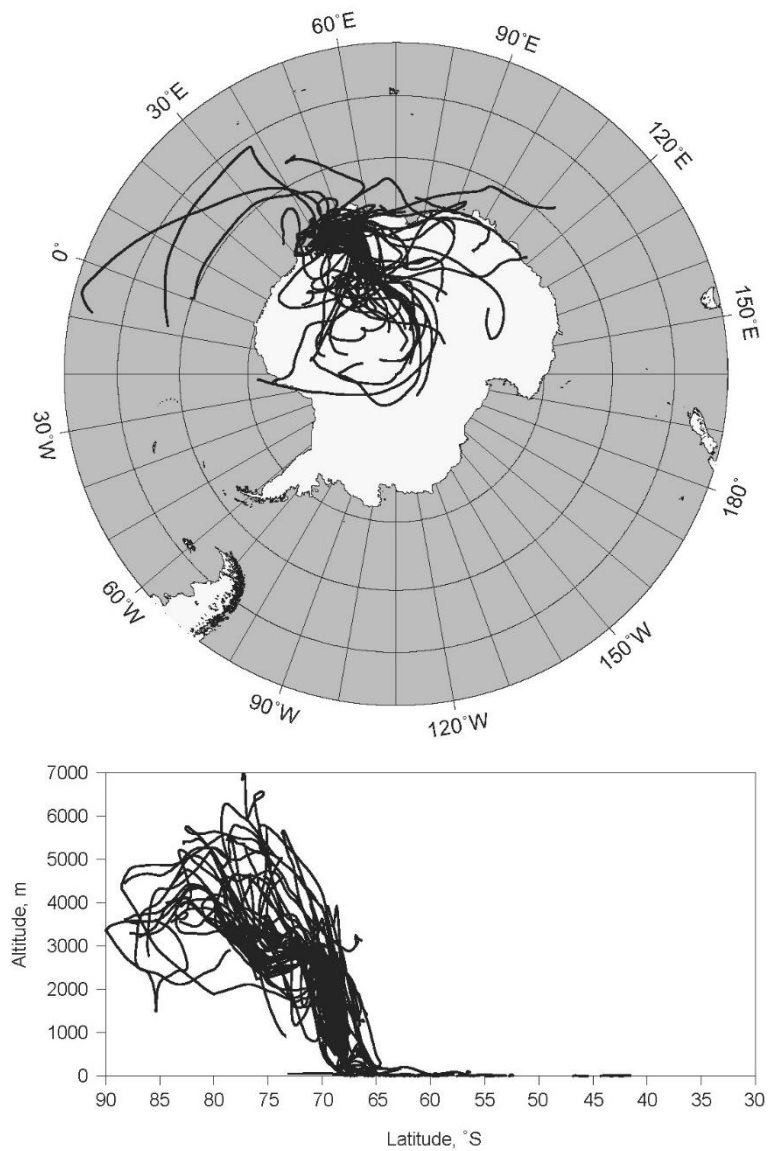


Figure S1: Five-day backward trajectory under conditions with appearance of a quad modal structure including fresh nucleation mode at Syowa Station during 2004–2006. Altitude represents height above ground level. Trajectory was calculated from altitude at 500 m above ground level over Syowa Station (69°S).

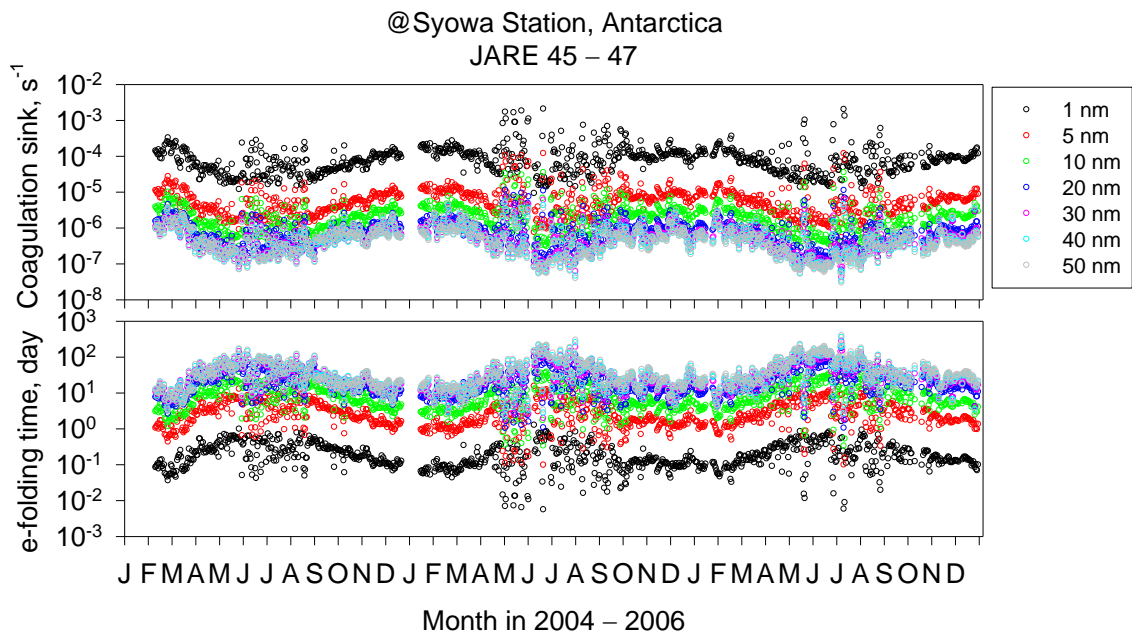


Figure S2: Seasonal variations of coagulation sink and e-folding time by coagulation loss at Syowa Station, Antarctica during 2004–2006.

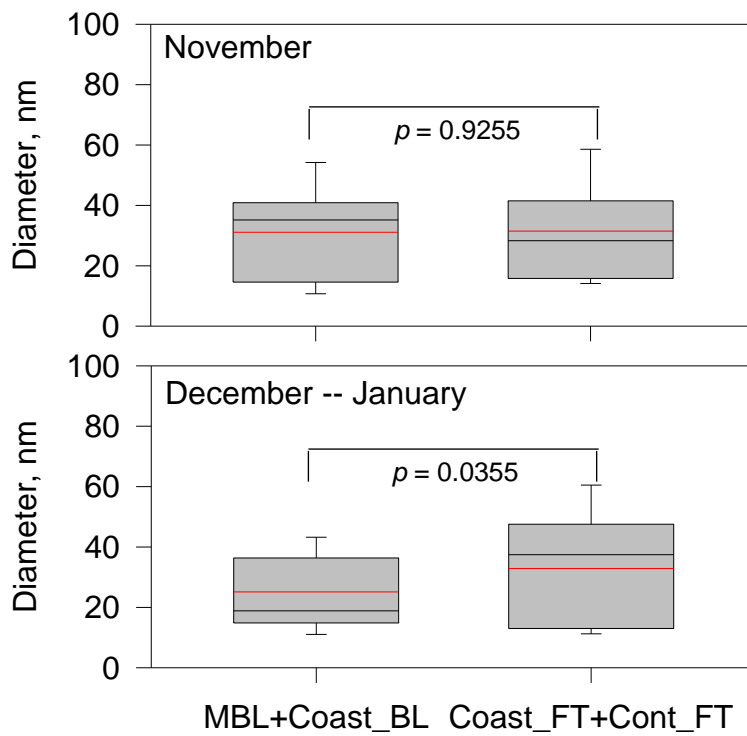


Figure S3: Modal size of the mode with smallest modal size in November and December. p denote p -value of ANOVA variance test. Degrees of freedom for the ANOVA variance test were 155. Box plots show values of 90, 75, 50 (median), 25, and 10%, denoted respectively by the top bar, top box line, black middle box line, bottom box line, and bottom bar. Red lines show mean values.

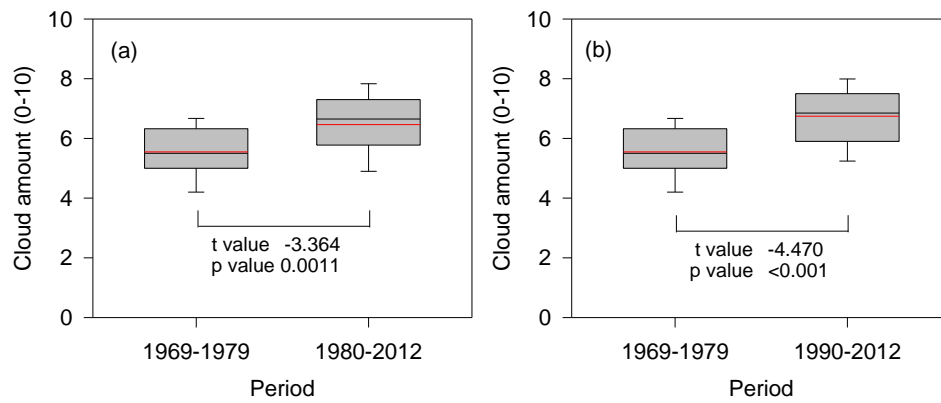


Figure S4: Cloud amounts for (a) 1969–1979 and 1980–2012, and (b) 1969–1979 and 1990–2012. t and p respectively denote t -values and p -values of t -tests. Degrees of freedom for the t -tests were (a) 86 and (b) 66. The period of 1980–1989 corresponded to ozone hole expansion. Box plots show values of 90, 75, 50 (median), 25, and 10%, denoted respectively by the top bar, top box line, black middle box line, bottom box line, and bottom bar. Red lines show mean values.