Supplement of Atmos. Chem. Phys., 26, 7127–7139, 2026
https://doi.org/10.5194/acp-26-7127-2026-supplement

Atmospheric Chemistry and Physics
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EGU

Supplement of

A satellite observation-based analysis of cirrus ice crystal number concentrations and underlying cirrus formation mechanisms over the Tibetan Plateau

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This file includes Supplementary Figs. S1–S7, which can be presented as follows:

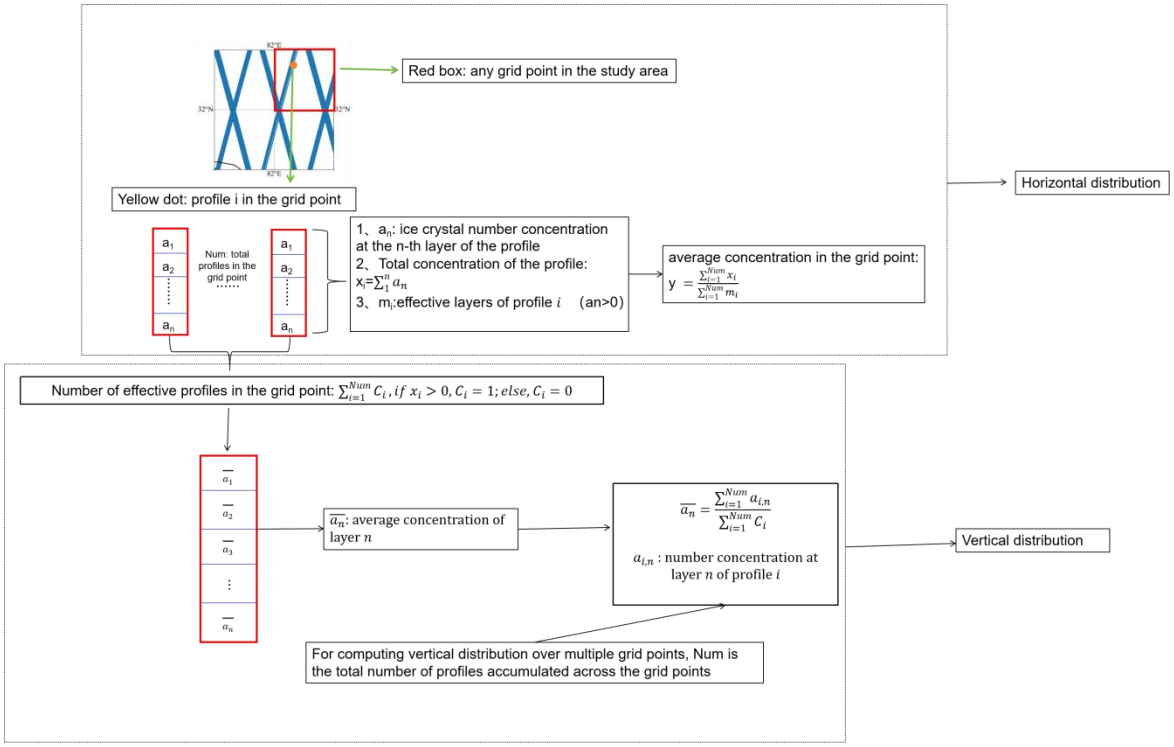

Fig. S1. Procedure for deriving N_i statistics, including calculations in both the horizontal and vertical directions.

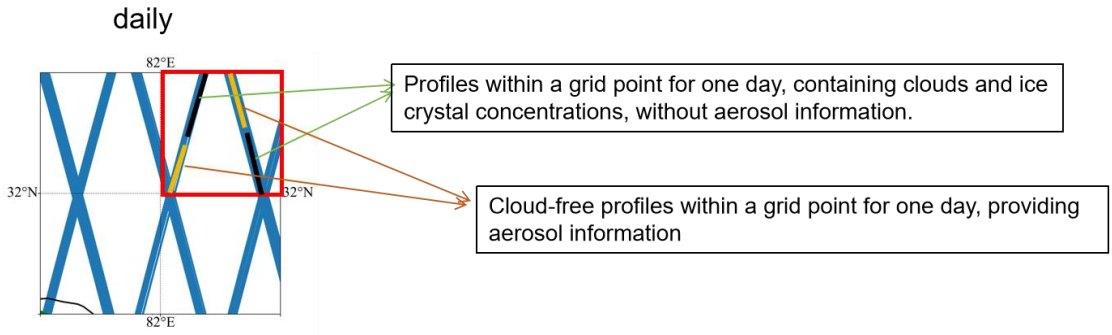

Fig. S2. Schematic diagram of the combination of aerosol and cirrus cloud properties.

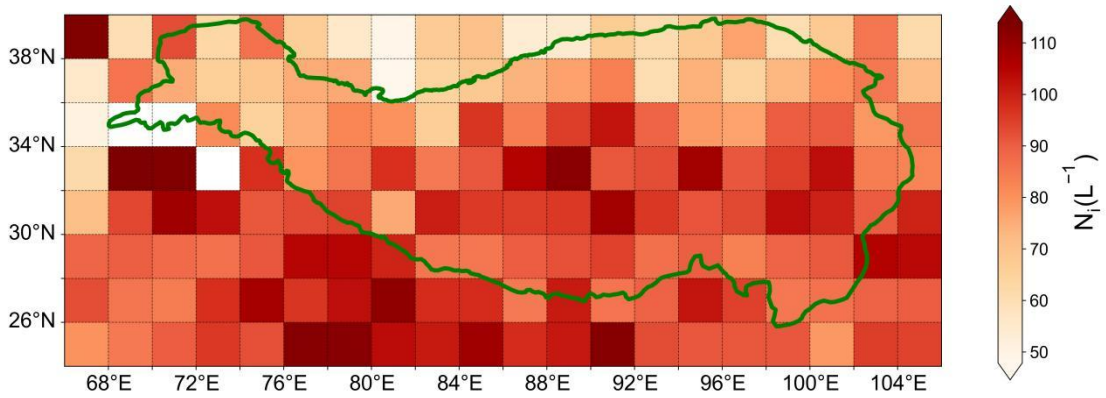

Fig. S3. Horizontal distribution of the averaged N_i (>25 um) during the summer from 2006 to 2016 (except 2011) over the TP. The green line is the border of the TP.

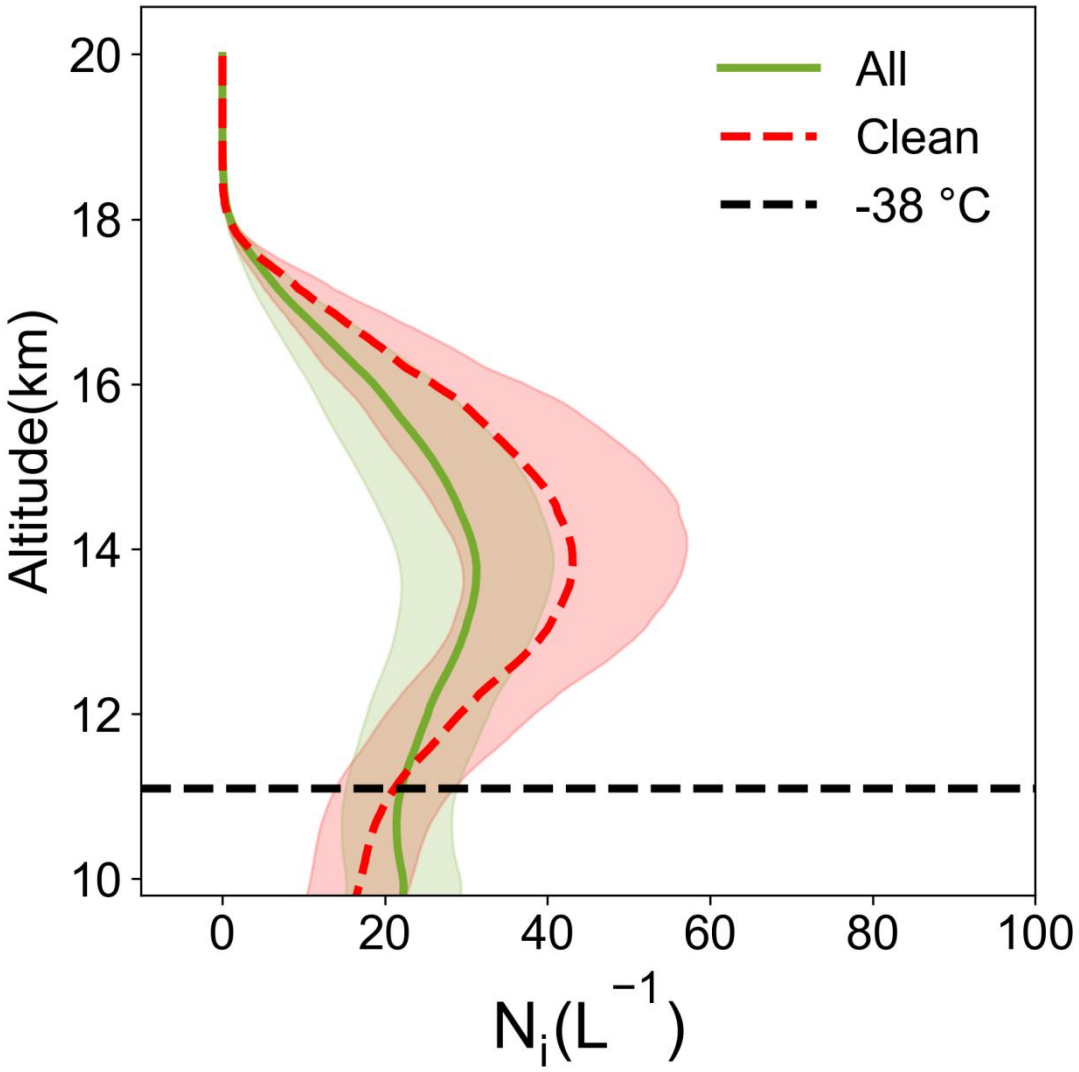

Fig. S4. Vertical profiles of N_i (>25 um) for all satellite-retrieved cases (‘all’) and for clean aerosol conditions (‘clean’), with light shading indicating the standard error range.

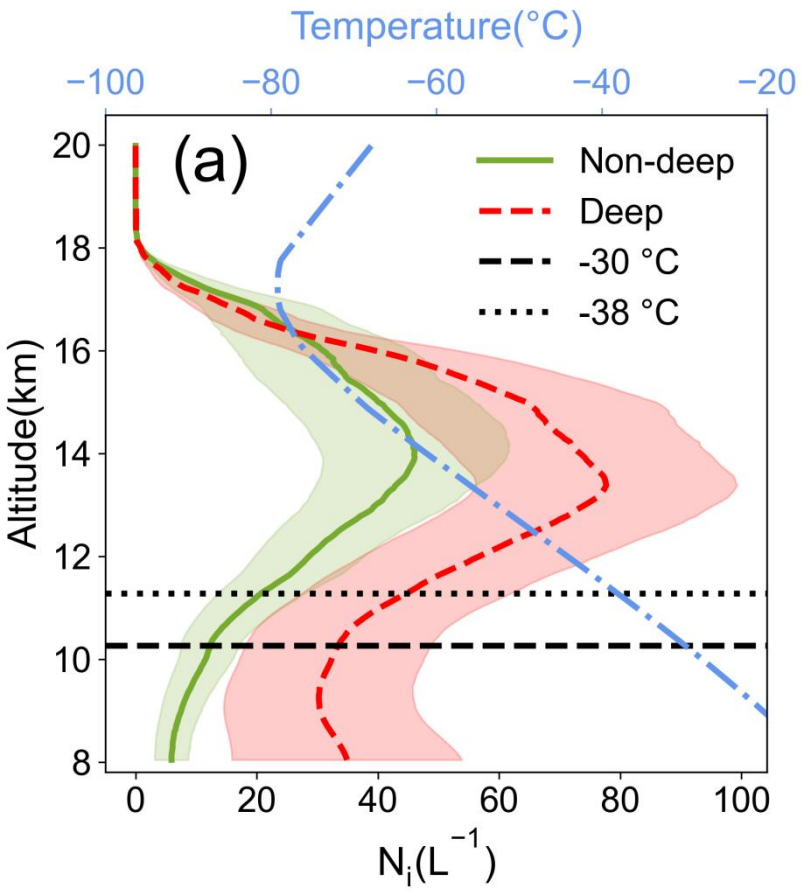

Fig. S5. Vertical profile of the N_i (>25 um) affected by DCO.

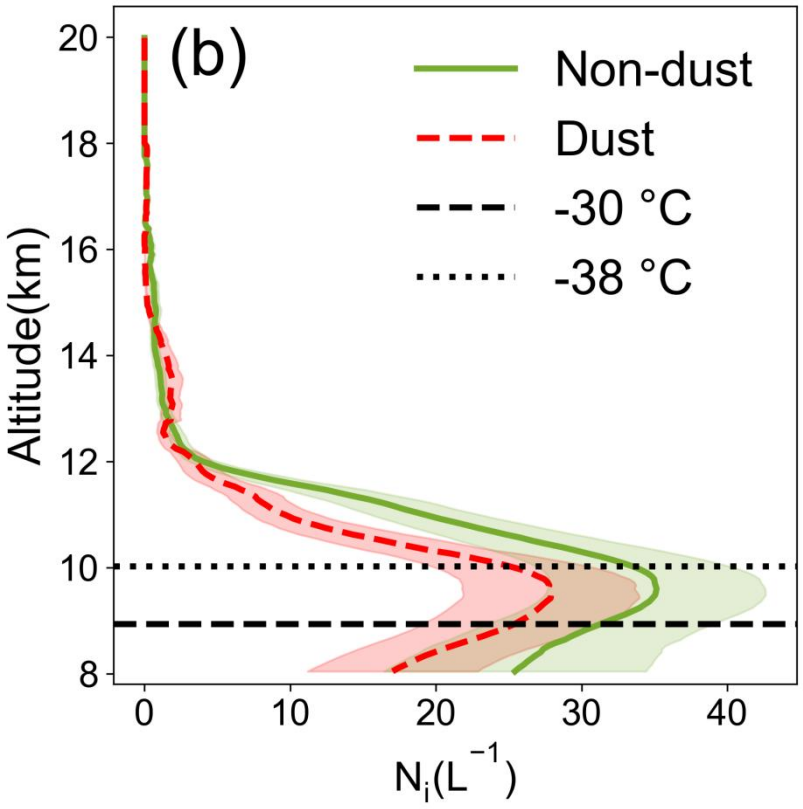

Fig. S6. The vertical profile of the N_i (>25 um) affected by dust and non-dust events. Here, 'non-dust' refers to all cases in which CALIPSO does not detect dust aerosols, including clean aerosol conditions.

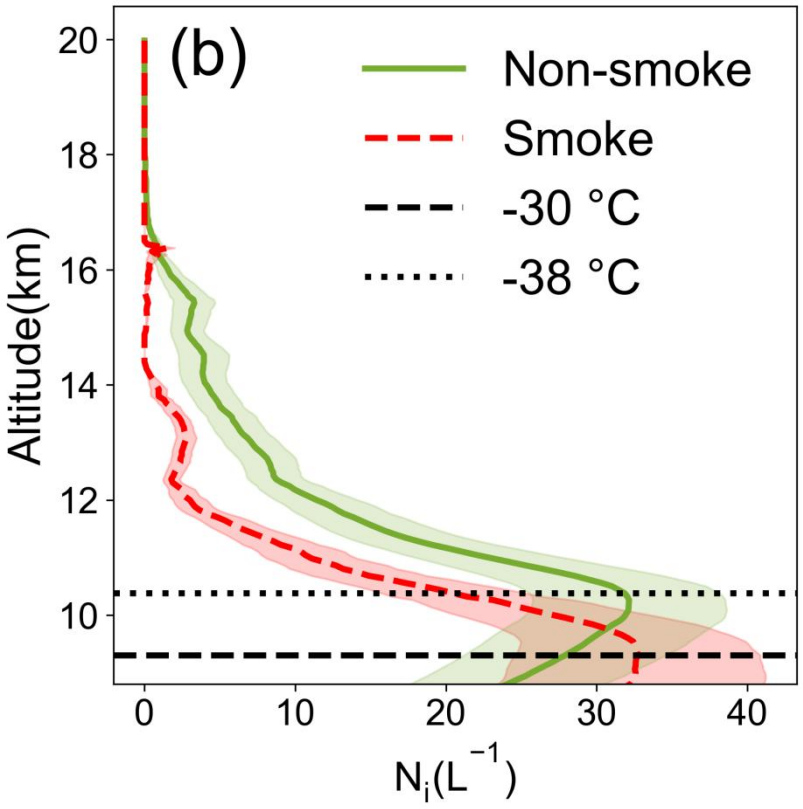

Fig. S7. The vertical profile of the N_i (>25 um) affected by smoke and non-smoke events. Here, 'non-smoke' refers to all cases in which CALIPSO does not detect smoke aerosols, including clean aerosol conditions.