

1 *Supplementary Information for*

2 **Impacts of South Asian aerosol inflow over Mount**
3 **Qomolangma on downstream cloud–precipitation processes**
4 **through a long-range ice-crystal “seeding” effect**

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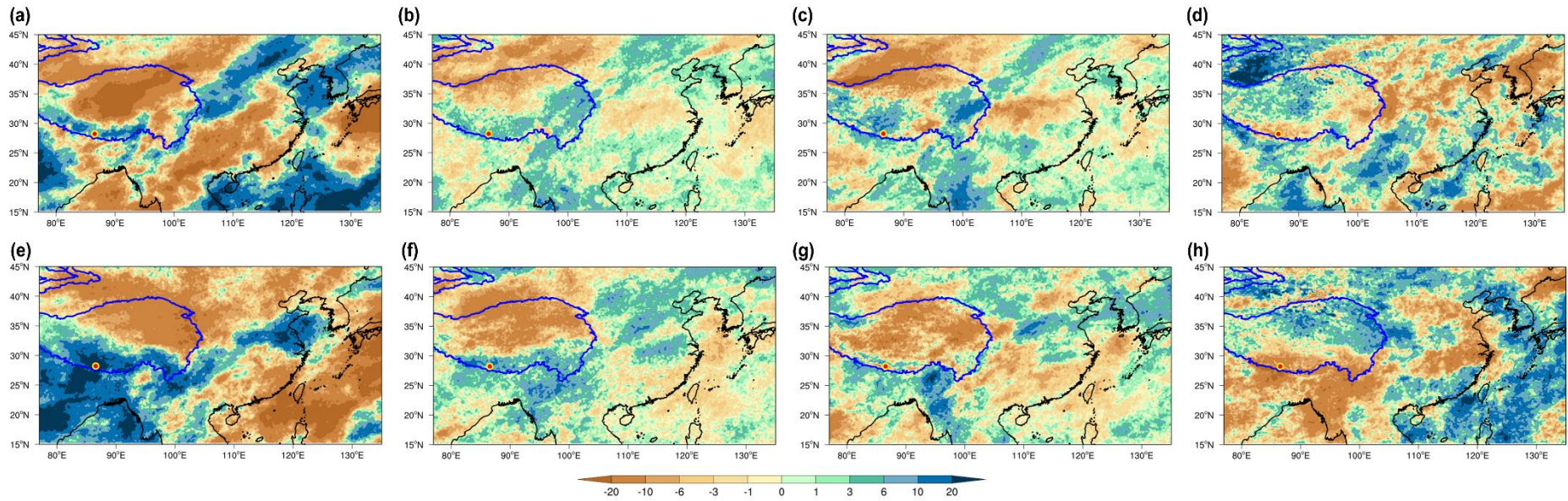
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33 **This file includes:**

34 Figure S1 and Table S1

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38 **Figure S1.** National-scale cloud-phase anomalies associated with aerosol loading: (a–d) Spatial distributions of national-scale cloud-phase anomalies under high- versus
39 low-aerosol-loading conditions during July 2018 — (a) ice phase, (b) mixed phase, (c) supercooled liquid phase, (d) liquid phase; (e–h) Same as (a–d), but for July
40 2019.

41 **Table S1.** High-concentration aerosol processes with the daily averages of $AEC \geq 0.025 \text{ km}^{-1}$ on
42 the MQ in July 2018 and July 2019, and the remaining periods are identified as low-concentration
43 aerosol processes, which are not listed in this Table ([Xu et al., 2025](#)).

Process	Starting Date	Ending Date
Process 1	9 Jul, 2018	12 Jul, 2018
Process 2	15 Jul, 2018	16 Jul, 2018
Process 3	21 Jul, 2018	25 Jul, 2018
Process 4	8 Jul, 2019	9 Jul, 2019
Process 5	12 Jul, 2019	13 Jul, 2019
Process 6	23 Jul, 2019	26 Jul, 2019
Process 7	28 Jul, 2019	30 Jul, 2019

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