Supplementary Material:

In situ chemical measurement of individual cloud residual particles at a mountain site, South China

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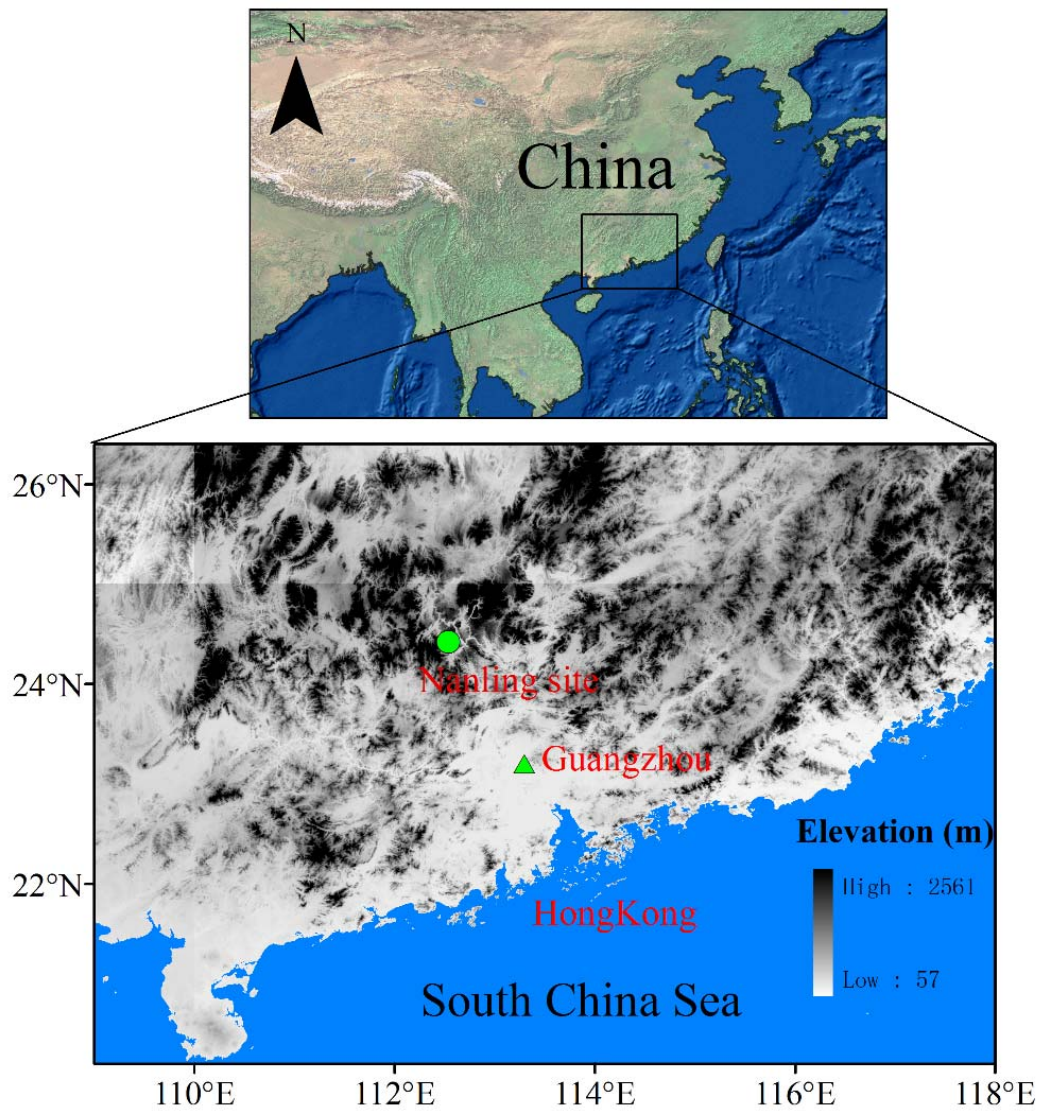
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21   Figure S1: The map for the study site.

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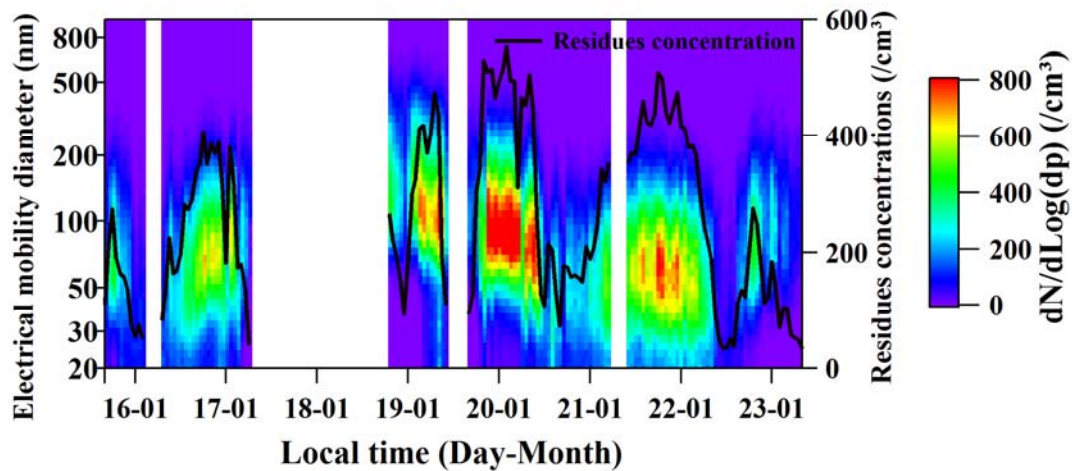
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24 Figure S2: Size distribution and concentration (electrical mobility diameter 20-900 nm) of cloud

25 residues was measured a scanning mobility particle sizer (SMPS). The data was corrected by

26 enrichment factor of 5.25. Note that the SMPS occurred a failure on 02:00 -07:00 16 January and

27 the system was set up manually switched method on 08:00 - 09:00 21 January.

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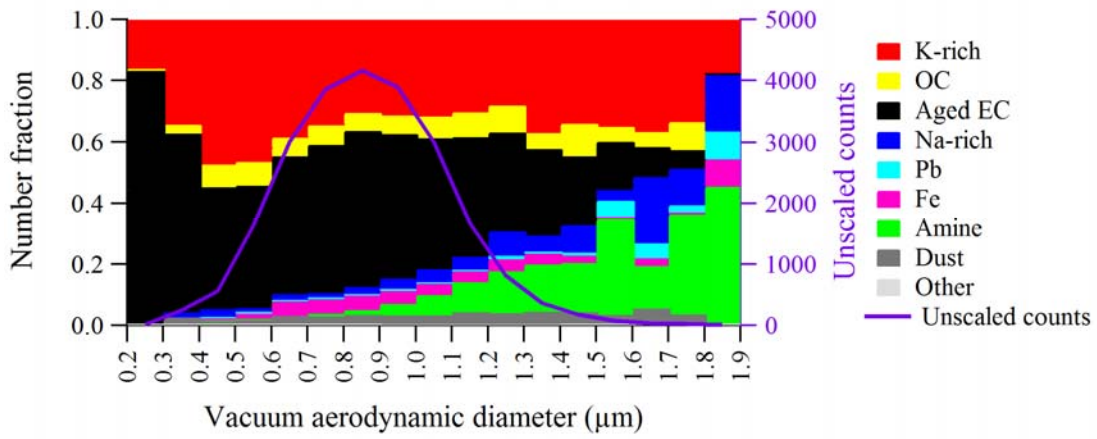
Figure S3: Number fraction for size distribution of cloud residual types.

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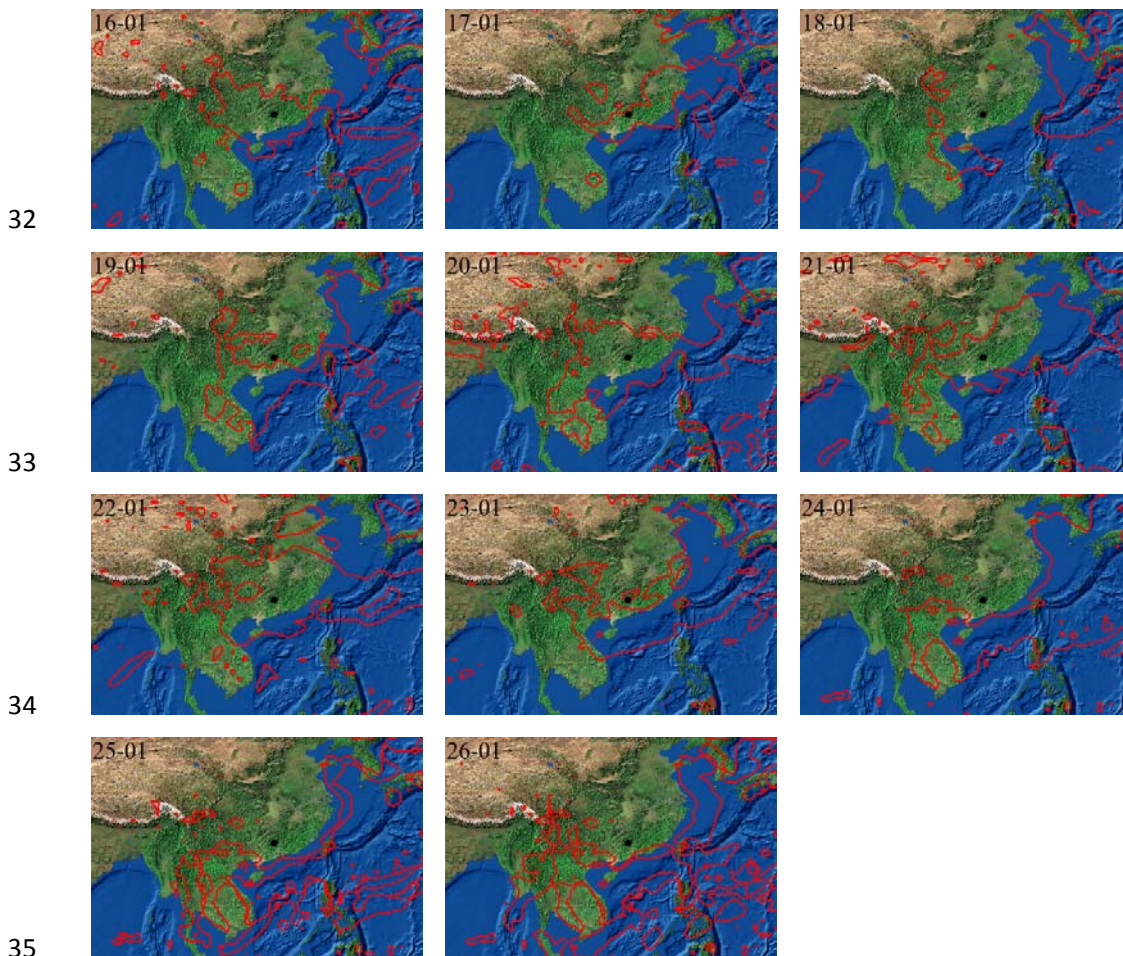
Figure S4: Contour lines (red lines) of relative humidity 90% at 850 hPa (about 1,500 m

a.s.l). Data is available at ftp://arlftp.arlhq.noaa.gov/pub/archives/gdas1/.

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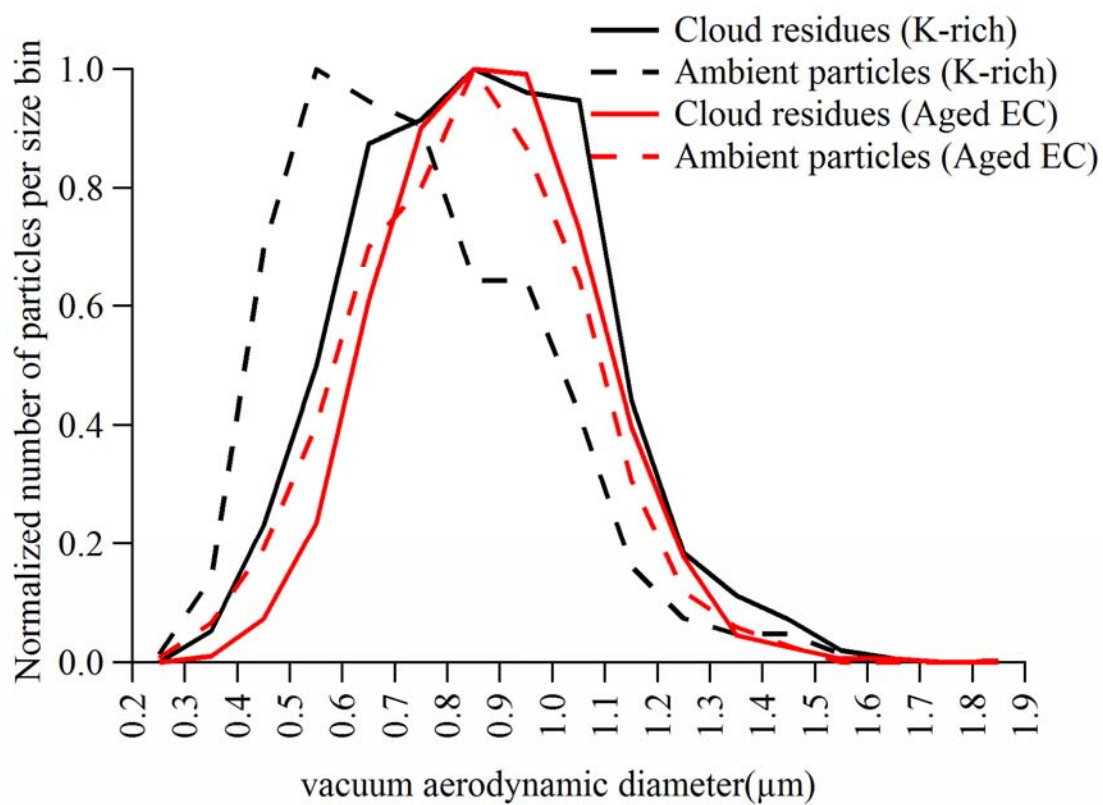
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40   Figure S5. Size distributions of the K-rich and EC type for the comparison of cloud residual

41   and ambient particles.

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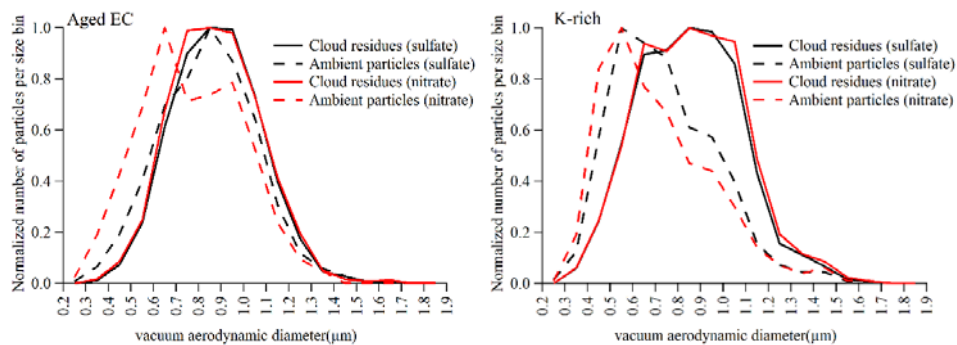
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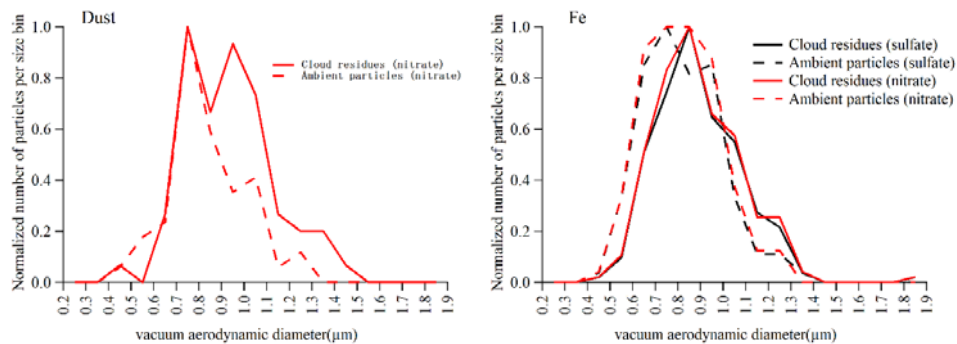
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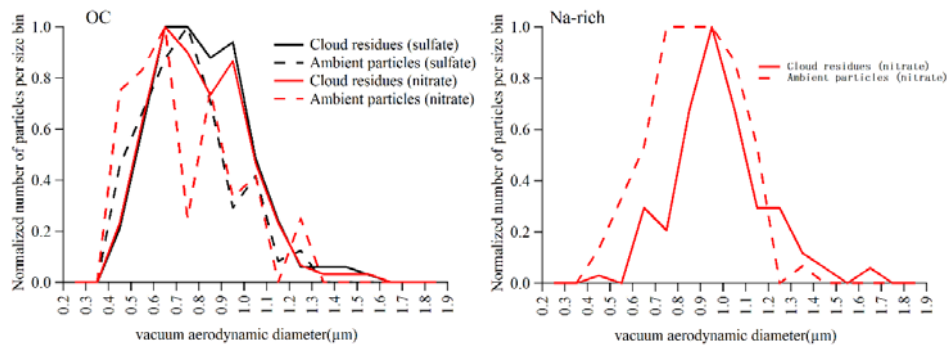
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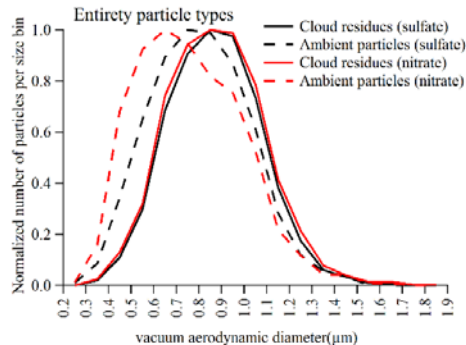
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47 Figure S6: Size distributions of sulfate- and nitrate-containing cloud residual and ambient

48 particles. Size distribution of sulfate- containing particles in the Na-rich and dust particle

49 types was not conducted due to the low number sulfate-containing particles of the two

50 types.

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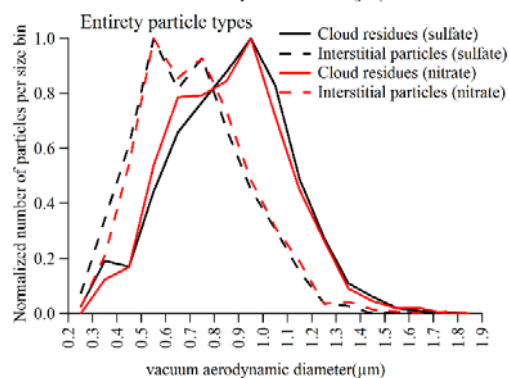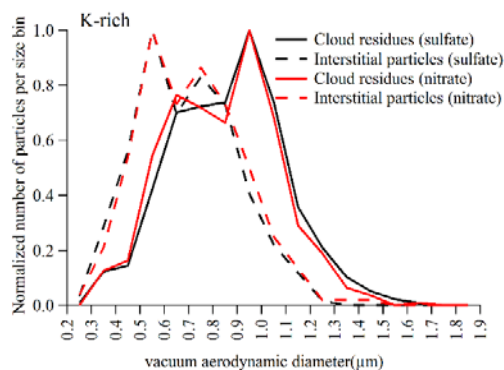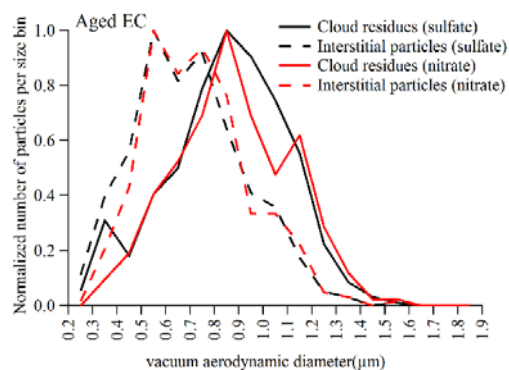
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54 Figure S7: Size distributions of sulfate- and nitrate-containing particles for the EC and K-

55 rich cloud residual and interstitial particles. The remainder of the particle types was not

56 presented due to insufficient number particles.

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