Anonymous Referee #1

- Please explicitly state in the text that the aerosol measurements "include both interstitial aerosols and in-droplet aerosols".

We thank the reviewer for the suggestion, and we have added additional descriptions in Section 2.2 regarding the aerosol instrumentation and measurement setup.

L168: …sampled air below 40%. "In this study, all aerosol measurements represent dry aerosols and include both interstitial aerosols and in-droplet aerosols."

- L18: To keep notation standardized, please replace ACI with ACI_Nd as in L19.

L18: …clouds exhibit features of the Twomey effect ("ACI_{N_d}"≈ 0.08); (2) under low MCr conditions (MCr = 3-4.5), not only is the ACI_{N_d} less than -0.06, …

- L261: for clarity, please rephrase to "at supersaturated conditions" because "under" could be misinterpreted.

L260: …Furthermore, conventional relative humidity instruments cannot capture variations "at" supersaturated conditions (RH > 100%). …

- L309: Please cite: Hilario, M. R. A., Bañaga, P. A., Betito, G., Braun, R. A., Cambaliza, M.O., Cruz, M. T., Lorenzo, G. R., MacDonald, A. B., Pabroa, P. C., Simpas, J. B., Stahl, C., Yee, J. R., and Sorooshian, A.: Stubborn aerosol: why particulate mass concentrations do not drop during the wet season in Metro Manila, Philippines, Environ. Sci.: Atmos., 2, 1428–1437, https://doi.org/10.1039/D2EA00073C, 2022

L308: …likely due to the relatively hydrophobic nature of black carbon ("Hilario et al., 2022"; McMeeking et al., 2011; Ohata et al., 2016; Pöhlker et al., 2023),

which reduces its susceptibility to wet removal compared to more hygroscopic components. …

- L311: Since this is a new paragraph, please specify what variable the "overall mean" refers to.

L311: The overall mean "of SSA for the entire field campaign" was 0.87 ± 0.02, …

- Table 2: Please also include the units of PM2.5 and LWC.

Table 2: the start, end local times and the mean of PM2.5, LWC of continuous cloud events (UTC +8).

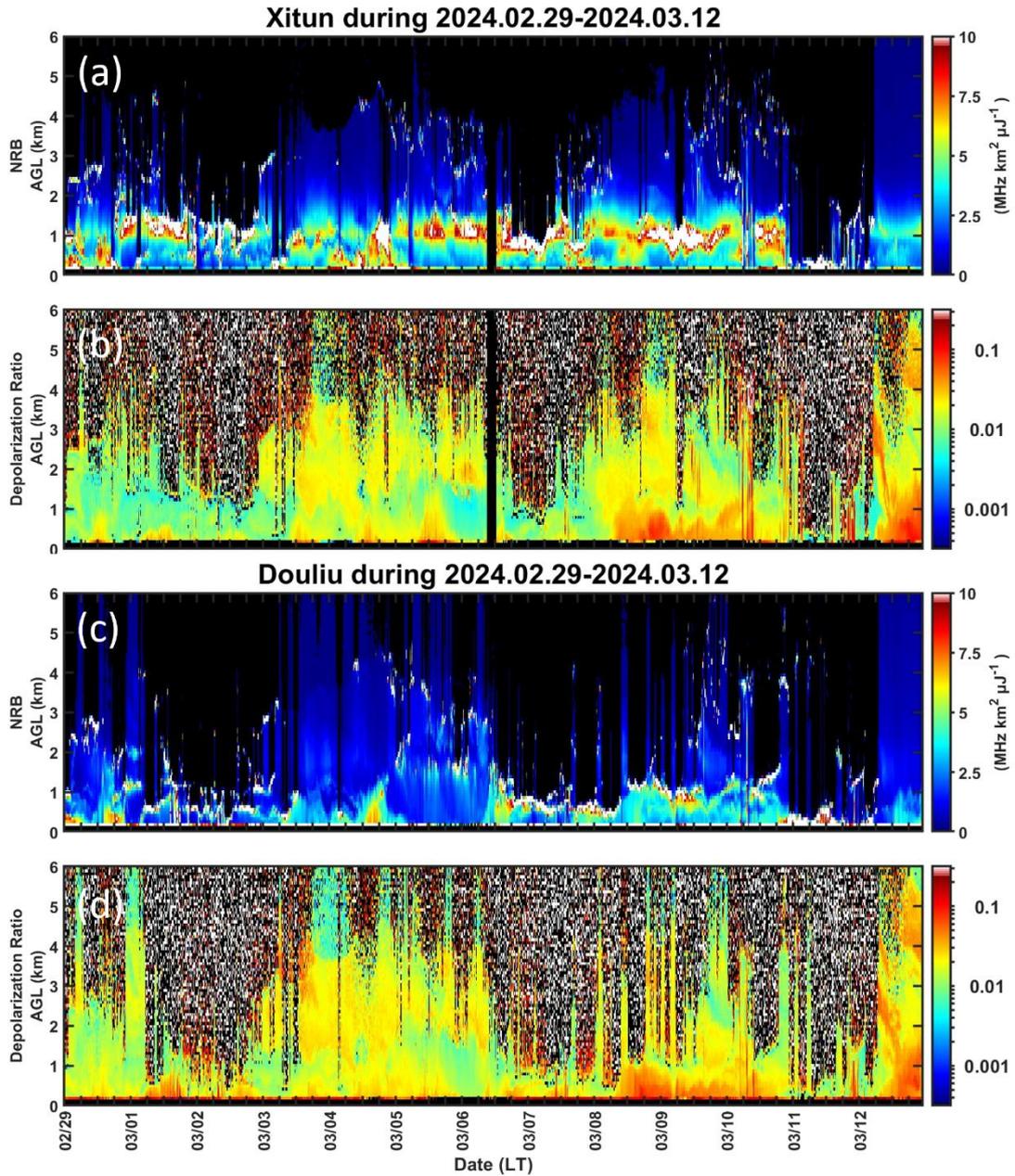| Cloud Event	Start Time (LT)	End Time (LT)	Average PM$_{2.5}$ (μg m^{-3})	Average LWC (g m^{-3})
Event 1	3/1 09:37	3/1 15:40	7.8 ± 3.1	0.130 ± 0.130
Event 2	3/7 09:16	3/8 07:28	11.4 ± 9.3	0.138 ± 0.126
Event 3	3/9 11:07	3/9 15:27	20.3 ± 4.5	0.163 ± 0.164
Event 4	3/10 02:13	3/10 06:00	2.3 ± 1.6	0.229 ± 0.085
Event 5	3/11 09:47	3/12 05:21	2.5 ± 3.2	0.147 ± 0.121

- Fig. S1: Define NRB.

Figure S1: Lidar observations at the Xitun site (24.16°N, 120.62°E) and Douliu site (23.71°N, 120.54°E) of the Taiwan Ministry of Environment from 29 February to 12 March 2024. Panels (a) and (c) "represent the normalized relative backscatter (NRB) profile", while panels (b) and (d) show the depolarization ratio.

- Fig. S4: Since the SI is separate from the main text, please include the description from Fig 8's caption on the colors and shapes.
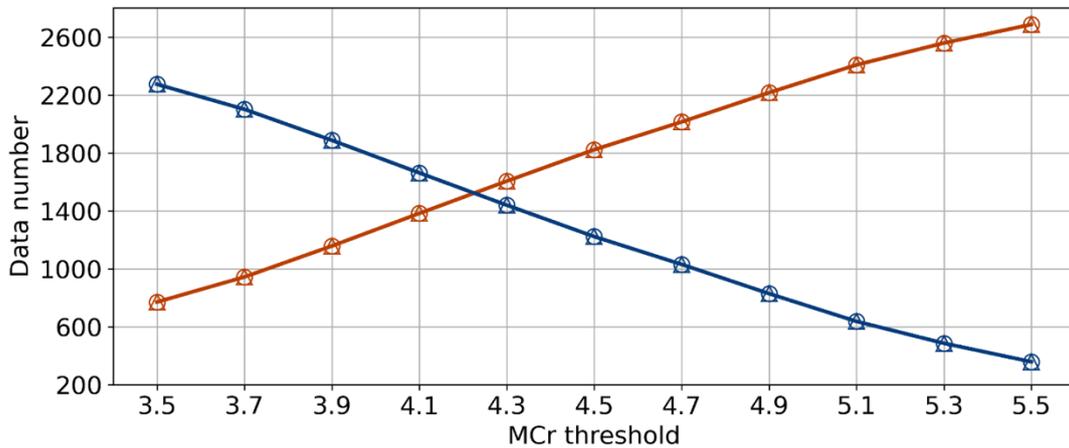
We thank the reviewer for the helpful suggestions. We have made additional grammatical revisions and clarified the descriptions of the supplementary figures. The figure resolutions have also been updated in the revised manuscript and supplementary materials.

L159: TSI 3563, which is manufactured by TSI, "can measure" the scattering coefficient and backward scattering coefficient for PM$_{10}$ and PM$_1$ at wavelengths of 450 nm, 550 nm, and 700 nm. …
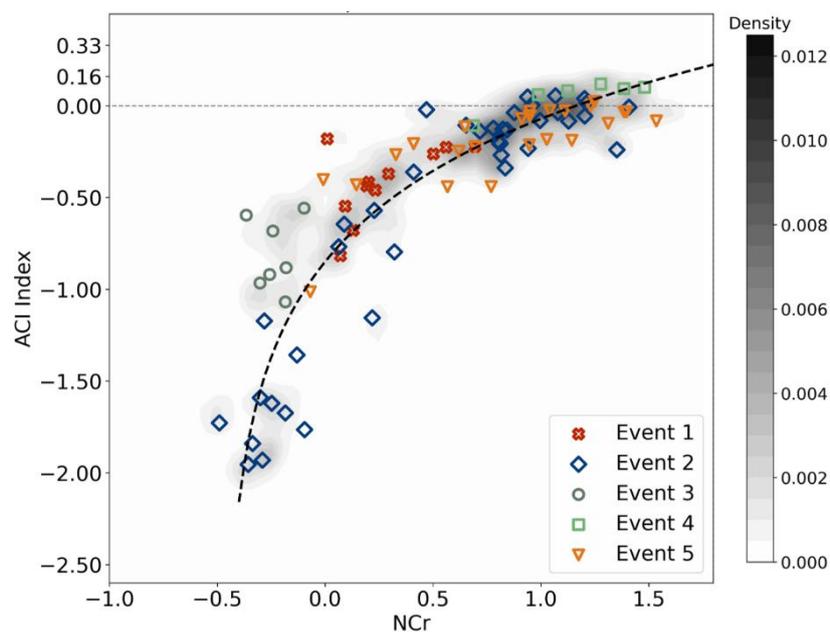
Figure S3: Scatter and density plots of the NCr-ACI index for the continuous cloud events. "The density plot illustrates the overall distribution of all calculated results, while the scatter plot shows the distribution of individual cloud events using different colors and symbols (one point shown for every 30 calculations)."

Reference:

Hilario, M. R. A., Bañaga, P. A., Betito, G., Braun, R. A., Cambaliza, M. O., Cruz, M. T., Lorenzo, G. R., MacDonald, A. B., Pabroa, P. C., Simpas, J. B., Stahl, C., Yee, J. R., and Sorooshian, A.: Stubborn aerosol: why particulate mass concentrations do not drop during the wet season in Metro Manila, Philippines, Environmental Science: Atmospheres, 2, 1428-1437, 10.1039/D2EA00073C, 2022.