Review of:
Particle size distribution and PM concentrations during synoptic and convective dust events in West Texas
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General comments
This paper presents the characteristics of dust concentrations and particle size distributions driven by synoptic or convective systems, in West Texas.

Overall, the paper is very well structured, well written and an important contribution in literature as measurements of particle size distributions are relatively abundant. Thus, I suggest that this paper should be published after some minor changes, that I address below.

Specific comments
Relevant studies (Gillette et al., 1974; Reid et al., 2005) that address the same questions should be added in the introduction as well as in the discussion section.

Apart from the wind speed, different soil characteristics of the dust sources can impact on the size distributions. How much differ the soil characteristics of the dust sources between the different measurements?

One of the major scientific questions is the presence of coarse particles in the atmosphere and the unknown mechanism that keep coarse particles aloft (van der Does et al., 2018; Drakaki et al., 2022; Meng et al., 2022; O'Sullivan et al., 2020; Ryder et al., 2019; Weinzierl et al., 2017).Thus, I strongly agree with Referee 1, that measurements of coarse particles should be moved from the supplement to the main text along with an additional analysis of the results.

Technical corrections
Line 81: remove **"Subsection (as Heading 2)"**

Line 35: a comma is needed instead of a full stop "Australia. Dust events"-> "Australia, dust events"

Line 165: on the title of Table 1 please specify that those values are the daily average values, not just daily.

Line 283: Typo peck-> peak

Line 334: In addition, more measurements during

different types of dust events (convective vs synoptic) are needed will improve our understanding of their implications->In addition, more measurements during different types of dust events (convective vs synoptic) will improve our understanding of their implications

Figure 3. It is better to use the same scale in the y-axis (same limits) for those plots

References

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