EGUsphere, referee comment RC1
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Comment on egusphere-2022-193

Anonymous Referee #1

Referee comment on "Particle size distribution and particulate matter concentrations during synoptic and convective dust events in West Texas" by Karin Ardon-Dryer and Mary C. Kelley, EGUsphere, https://doi.org/10.5194/egusphere-2022-193-RC1, 2022

The authors present an interesting study on the properties of dust particles during convective-driven and synoptic-driven dust storms. The study is based on in-situ measurements of mass and number concentrations of dust particles and also size distributions at high temporal resolution. It is well written with justified results and provides important evidence of dust properties inside the dust storms. Overall I recommend publication in ACP.

Minor considerations are:

1. Move the Grimm results (Figure S3) from the supplement to the main text and elaborate more on the results shown in this plot. These are important measurements of coarse dust particles (>10um) directly inside the density currents that are not often available in the literature.

2. Line 281, a typo, Coarse