Dingemanse et al. evaluate SPS30 and SEN55 low-cost $PM_{2.5}$ sensors against gravimetric measurements in Arba Minch, Ethiopia, and against Swedish background data. The measurements cover a wide concentration range, from ~4 $\mu g/m^3$ ambient background to biomass-burning peaks exceeding 2000 $\mu g/m^3$, and include the first field characterization of the SEN55's digital truncation behavior. The manuscript is well-structured and the scope is suitable for *Atmospheric Measurement Techniques*. I recommend major revision on the following questions.

Major questions:

Section 4.4.2 and Table 6: The indoor evaluation uses a UPAS sampler (expanded uncertainty ~12%, not a reference method), and the authors' own plume calculation shows that 0.3 m displacement changes concentrations by ~16%, which matches the observed inter-unit slope spread of 1.01–1.25. This suggests the slope variability might be dominated by spatial gradients rather than sensor response. Please provide an error budget separating sensor error, UPAS uncertainty, and spatial gradients, and qualify the term "validation" in the abstract accordingly.

Sections 3.5 and 4.7: The κ-Köhler correction uses $\kappa = 0.3$, a continental value, while Section 4.7 itself argues that local biomass-burning aerosol likely has $\kappa \approx 0.06–0.19$. Please recalculate the RH correction with a locally representative κ. This would directly test whether the negative post-correction trend disappears and would strengthen the argument that RH corrections are unnecessary in this environment.

Section 2.1 and Appendix D: Outdoor 2 is located behind a window (physically indoors) and contributes 36 of the 53 outdoor filter pairs. Indoor placement attenuates concentration peaks and may modify the sampled size distribution, and Appendix D.1

already shows different variability at the two sites. Please report the regression results separately for Outdoor 1 and Outdoor 2 to justify pooling them, and describe the nature of this site in the main text rather than only in the appendix.

Minor suggestions:

Section 4.7 and Appendix C.1.3: The self-heating of the SEN55 lowers the internal RH, but indoor biomass-burning aerosol is enriched in semi-volatile organic compounds. Please discuss whether internal heating could evaporate SVOCs before optical detection, which might partly explain the indoor (1.14) versus outdoor (1.21) slope difference.

Appendix A.3: The post-hoc exclusion of SEN1 and SEN2 in Phase 2 is justified only by citation, not by the authors' own data. Please report the affected results with and without these exclusions, and state whether the 12.5% SDT rejection threshold was defined a priori.