Report on "Dataset of aerosol, ozone, and meteorology observations at the surface coastal site of Henties Bay in Namibia", Formenti et al.,

General comment

The manuscript by Formenti et al. presents a valuable and comprehensive dataset collected at the Henties Bay Aerosol Observatory (HBAO), Namibia, including aerosol optical properties, aerosol mass concentrations, equivalent black carbon (eBC), ozone, meteorological observations, and chemical composition measurements. This dataset is extremely useful for research on aerosol transport, marine boundary layer processes, atmospheric chemistry, and model evaluation since HBAO site fills a significant observational gap across the southeast Atlantic coastal region.

Overall, the dataset was of significant scientific value and the manuscript was well-structured. The measurements, which span a number of years and integrate numerous complementary observational techniques, offer a resource that will be helpful to a wide range of people.

However, I found that some parts of the Results section are difficult to follow because the connection between the text, the figures, and the corresponding interpretations is not always immediately clear. In addition, several figures rely heavily on the captions or the main text for their interpretation, making them less self-contained than they could be. The manuscript also occasionally assumes a level of familiarity with the dataset that external readers may not have. Improving the clarity of the figures and making some of the interpretative steps more explicit would substantially enhance the accessibility and long-term usability of this otherwise valuable dataset.

None of the comments below diminish the overall value of the dataset, which I believe will constitute an important resource for the atmospheric science community. My suggestions are primarily intended to improve the clarity and long-term usability of the manuscript and its associated data products. **Overall, I believe that the manuscript would benefit from minor revisions before publication.**

Major comments

Throughout the manuscript, several interpretations presented in the text are not immediately supported by the accompanying figures. In general, I encourage the authors to improve the consistency between the discussion in the text and the graphical evidence provided in the figures.

Lines 318-320: The discussion linking the seasonal increase in AOD with the decrease in SSA and the increase in fine-mode aerosols is not straightforward when comparing Figures 3 and 4. While the interpretation provided by the authors may well be correct, this relationship is not immediately apparent from visual inspection of the monthly box-plots. In addition, the Henties Bay panel in Figure 3 and the panel showing SSA in Figure 4 look very similar and also by their visual appearance (boxplot style, color scheme, and overall layout), despite representing different physical quantities. This similarity may inadvertently suggest a stronger correspondence between the variables than intended and makes the comparison more difficult for the reader. A more distinctive graphical presentation and clearer annotation would improve the interpretation of these results.

Lines 380-381: "On the other hand, a distinct seasonal cycle with hourly concentrations as high as $400\ \mathrm{ng\,m^{-3}}$ is instead observed for eBC". This statement is difficult to reconcile with Figure 6 and Figure S1, where such values are not readily visible. If this statement refers to isolated hourly maxima rather than the distributions represented by the boxplots, this should be clarified explicitly.

Section 3.2.4: I found the discussion surrounding the PM10 mass scattering efficiency (MSE) and Figure S5 somewhat difficult to follow. While the definition of the MSE is clear, the motivation for introducing this quantity and its connection with the subsequent discussion on the relative contributions of different aerosol species to particle scattering could be explained more explicitly. In particular, the logical transition to the discussion of eBC concentrations and the conclusion that their contribution to particle scattering is negligible is not entirely clear. Expanding this section and making the underlying reasoning more explicit would improve readability.

Minor comments

Several figures could be improved to enhance readability. In particular, Figures 5, 6, 8 and 9 are somewhat difficult to read at publication scale due to relatively small fonts and dense graphical elements. Figure 7, on the other hand, provides a much clearer presentation and could serve as a useful reference for improving the overall graphical consistency of the manuscript. Overall, adopting a more homogeneous graphical style across figures (font sizes, color conventions, annotations, layout, and image resolution) would improve readability. In addition, several figures could be made more self-contained, as important information such as the identity of the plotted variables or the interpretation of colors is sometimes only available in the caption or the main text. Finally, following the ESSD figure guidelines by consistently labelling multi-panel figures using (a), (b), (c), etc., instead of referring to panels as ”top”, ”middle”, or ”bottom”, would further enhance clarity.

Figure 3: The comparison among AERONET sites would benefit from larger panels or improved scaling. Because different y-axis limits are used for each site, direct visual comparison of seasonal variability is not straightforward. While this choice is understandable given the different AOD ranges (particularly for Simonstown), the authors may consider harmonizing the axes where possible or explicitly highlighting the scale differences.

Figure 4: This figure is particularly difficult to interpret without repeatedly referring to the caption. I suggest adding explicit panel labels ((a) and (b)), clearer axis labels, and legends directly within the figure. In addition, similar color schemes are used for different quantities in the two panels, which may create confusion during reading.

Figure 6: This figure refers simply to ”aerosol mass concentration”, whereas the discussion concerns PM10 concentrations following the inlet change in 2014. Explicitly specifying the measured quantity in the figure or caption would improve clarity.

Supplementary figures: Several supplementary figures, particularly Figure S1, are difficult to read due to the small panel size and limited resolution. Increasing the size of the individual panels or splitting some figures into multiple pages would substantially improve readability and facilitate comparison with the discussion presented in the main text.

Table S1: Although the AERONET analysis is not the central focus of the manuscript, I suggest providing more accurate information regarding the temporal coverage and data availability of the selected stations. In particular, some sites experienced substantial interruptions in operation that are not apparent from the reported periods. For example, Maun site is indicated as operating from 2000 to 2023, whereas observations are effectively available from September-October 2000 and then from 2016 onwards. Likewise, Mongu site correspond to two distinct AERONET stations (Mongu and Mongu Inn), with the former operating approximately during 1995–2010 and the latter from 2013 onwards.

Explicitly acknowledging these discontinuities and station changes would improve transparency and help readers correctly interpret the seasonal comparisons presented in Figure 3.

Line 448: There is the letter ″s″ missing in the subscript for σ_{scatt}.