In this study, the authors compared the aerosol optical depth (AOD) time series between two alpine valleys from 2007 to 2023. The paper is well written. The methods used and the results obtained are reasonably well documented. The long data series is a treasure in this field of aerosol research. I therefore recommend the manuscript for publication in the journal Aerosol Research.

The authors, however, should consider the following questions and recommendations when preparing the final draft. (In specific cases I refer to the page and line numbers of the draft I received.)

A more precise description of the two sites would be important because many readers do not know anything about the two sites. Characterize the site, such as type of town, e.g. industrial area, cultural center, population, etc. Furthermore, please provide detailed information on the meteorological conditions.

We have added this section to the introduction:

Innsbruck, situated in the broad Inn Valley, is a prominent cultural and academic center in western Austria with obout 132,000 residents. The city's geographical position in a large valley facilitates unique meteorological conditions, characterized by pronounced seasonal variations. Typical weather patterns include relatively dry winters and wetter summers, with occasional föhn winds influencing both temperature and precipitation levels. Davos, on the other hand, is a high-altitude town located in the Swiss Alps. It has a smaller population of about 11,000, which can swell significantly during tourist seasons. Davos experiences a subarctic climate, which includes long, snow-rich winters and cool summers. The meteorological setup in Davos leads to a distinct aerosol composition primarily influenced by tourism-related activities and seasonal sports events, contrasting with Innsbruck's more urban aerosol sources from vehicular traffic and industrial emissions. Both sites, therefore, offer contrasting environments for the study of aerosols, significantly enhancing the comparative analysis of long-term AOD trends.

Page 2 Figure 1 and page 3 Figure 2: Both sites are missing data around 2013. Please explain.

The data gap in Innsbruck range from October 20212 to January 2013. The data gap in Davos range from November 2012 to February 2013. The sun photometer from Innsbruck was in Davos for maintenance and calibration at this time. We added two horizontal colorbars for a better visual detection of the data gaps.

The markers in Figure 1 and 2 are difficult to understand. Please correct.

We combined figure 1 and 2 into one figure. The time series of Innsbruck and Davos are now better comparible and the markers are correctly explained in the caption.

Page 3, Line 47: The monthly data is 73.2 % in the text while 83.2% in Table 1. Please correct it.

The values in table 1 are correct., We changed the text (line 47) accordingly.

In Figure 8 the markers cannot be followed. Which is the black dot and which is the blue one? Please clear them.

We apologize for the error. After updating the figures we did not update the caption. The content of the ifigure should now be clear to the reader with the new caption: "Deseasonalized monthly AOD for Innsbruck (greenish circles) and Davos (bluish crosses). The 12 month running mean (thin lines; Innsbruck - greenish, Davos - bluish) and the respective linear trends (thick lines)"

The authors use the term correlation several times in the text. In these cases I would expect correlation values with significance levels. Please correct them.

We calculated p-value and Person correlation coefficient (r) for all trends. The trend is considered significant if the conditions $p<0.05$ and $|r|<0.6$ are fulfilled.