

Dear Editor,

Please find below the answers to your remarks. Our replies are highlighted with red font and ** symbols.

The authors

L. 44: Do you need “in fact”?

**** It is not necessary, “in fact” was removed**

L. 48: You mean the diffuse component? If so, specify.

**** “...enhancing (or reducing under a highly absorbing aerosol) the diffuse component.”**

L. 72: You mean the aerosol climatology for the Iberian Peninsula? If so, specify.

**** “...which modulate the aerosol climatology of the Iberian Peninsula”.**

L. 81: “...on the radiative...”. + L. 83: Remove “followed”. + L. 98: Better to use “...is provided...”. + L. 108: “...protocols by the...”. + L. 109: “...approximately every 12 months of operation.”. + L. 111: I suggest replacing “about” with “of”.

**** All these comments were included in the manuscript.**

L. 120: Do you mean “produce” when you say “elaborate”?

**** This issue was corrected: “by AERONET to produce the level”.**

L. 126: “...e.g., ...”. Apply elsewhere. + L. 127: “...for analyzing...”. + L. 135: “...same order of the...”. + L. 140: “...effect is unrealistically...”. + L. 210, 212: “...the Sen method...”.

**** All these comments were included in the manuscript.**

L. 261: Do you need “actually”?

**** ‘Actually’ was removed.**

30 L. 302: indexes -> indices. Checked in the web, and “indices” is the appropriate plural form
 31 here.

32 ** Ok, changed.

33

34 L. 311-312: Rephrase this, as it does not indicate that the trend is not significant. Also, reword
 35 the next two sentences to be consistent. Here and elsewhere, would it be better to talk about
 36 “changes” rather than “trends”?

37 ** Rephrased: “The AOD_{440nm} temporal change for the other sites exhibits *p* values over 0.05.
 38 Hence, non-statistically significant results are obtained for the other sites. In spite of that, the
 39 sign of all temporal rates is negative...”. We have substituted the word “trend” by “change” or
 40 “rate” when it is appropriate throughout the manuscript. We maintain the “temporal trend”
 41 term in the discussion of Figure 6 since, in this case, it is clearer the temporal evolution of the
 42 ARE values.

43

44 L. 316: mixed -> mix

45 ** Changed.

46

47 L. 384: I suggest “The AFE...”, to avoid starting a sentence with an acronym. Apply elsewhere
 48 (e.g., L. 428).

49 ** Following the Editor’s suggestion, this issue was checked throughout the manuscript.

50

51 L. 466: The previous sentences mention a positive trend; here you mention a decrease. Please
 52 check.

53 ** It is due to the negative ARE values: a positive trend means values are approaching to zero.
 54 We clarified this point: “This decrease in the aerosol radiative effects (since ARE values are
 55 negative)...”.

56

57 Figs. 1, 2, 3 captions: Indicate that the plots are for the six stations studied.

58 ** This information was added.

59

60 Fig. 4 caption: “...The larger the symbol, the larger the...”.

61 ** Corrected.

62

63 Fig. 9 caption: define the particle size ranges (using information from legend).

64 ** “Figure 9. Dependence of AFE_{VIS}/AFE_{SW} (a, c, e) and AFE_{NIR}/AFE_{SW} (b, d, f) ratios on SSA for
65 large, $0 < \alpha < 1$ (a, b), medium, $1 < \alpha < 1.5$ (c, d), and small, $1.5 < \alpha < 2$ (e, f), particles at the six
66 sites: Barcelona (blue diamonds), Palencia (purple triangles), Évora (red squares), Cabo da Roca
67 (grey crosses), Granada (black stars), and El Arenosillo (green circles).”

68

69 Fig. A1 caption: indicate which panel is which.

70 ** It was indicated in the previous version, but we have stated more clearly: “...and (a)
71 continental clean (CC) and (b) continental polluted (CP) aerosols...”