Dear Referee #2, thank you for your feedback on the updated version of the manuscript.

Response to comment #1 :

While we acknowledge that in general performing a direct comparison of the monthly anomalies (10-year monthly means minus monthly values) is an interesting approach, we would like to emphasize that an interannual variability analysis is outside of the main objectives of this paper.
Indeed, our paper focuses on the seasonal and spatial regional variability of surface solar radiation for the current period and for two future climate scenarios at mid- and end-century. All the figures of the paper, except new Figure 7, align with these main topics and for consistency reasons we do not wish, in this paper, to provide a deeper analysis of interannual evolution.

We recall here that in response to your initial comment, we added a fully new section (Section 3.4) and a comprehensive figure (Figure 7) in the revised manuscript. Figure 7 represents all the components of the monthly time series (including seasonality, anomalies, and trends), which allows to provide, in a first approach, the interannual changes while remaining consistent with our study main objectives and scope.
Nonetheless, we appreciate the suggestion and will certainly consider this approach as a future reference, as such an analysis would indeed offer additional valuable insights.

Response to comment #2 :

Thank you for the provided references: Norris and Wild (2007) is indeed an interesting approach that deserve to be mentioned. It is included in the references list of the paper.
The very recent article of Correa et al. (2024) is also relevant,with an approach to qualitatively distinguish the effects of changes in cloud cover and cloud optical properties on all-sky SSR, so thanks for the suggestion.

Both references are now mentioned in the conclusions of the manuscript (lines 631-634, page 28).

« In addition, considering that our results highlight the importance of cloud cover changes in modulating forthcoming aerosol influences on SSR, further investigations of cloud cover evolution and impacts on SSR variability would be highly recommended (Norris and Wild, 2007; Correa et al., 2024). »