

Weather Clim. Dynam. Discuss., author comment AC3
<https://doi.org/10.5194/wcd-2022-19-AC3>, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.



Reply on RC3

Adrian Simmons

Author comment on "Trends in the tropospheric general circulation from 1979 to 2022" by
Adrian John Simmons, Weather Clim. Dynam. Discuss.,
<https://doi.org/10.5194/wcd-2022-19-AC3>, 2022

I think my response was perhaps not as clear as intended. I do not wish to downplay the importance of the seasonal changes. Aside from the fact that Figure 10 is used to make some additional points - showing for instance a comparison between ERA5 and JRA-55 that would otherwise have to be either omitted or presented for each season - I do think it is important to point out that the changes from one season to another do tend to cancel in the annual mean for some features. It could (but might not) give a misleading picture if the season with the largest (most statistically clear cut) change is given undue emphasis in a situation when each of the other three seasons show a change of opposite sign but with magnitude smaller by a factor of 3. So I prefer to retain Figure 10 in addition to Figure 11. This does not mean I think Figure 10 provides a better indicator of "real" change than Figure 11. I agree with the point that for a particular feature a particular temporal averaging might be better than using the traditional four three-month seasons, but what is an optimal averaging period for one circulation feature is unlikely to be optimal for other circulation features, and I am trying in the paper to provide a global overview.