

Response to RC1

Comment on angeo-2021-51

Anonymous Referee #1

Referee comment on "Long-term studies of MLT summer length definitions based on mean zonal wind features observed for more than one solar cycle at mid- and high-latitudes in the northern hemisphere" by Juliana Jaen et al., Ann. Geophys. Discuss., <https://doi.org/10.5194/angeo-2021-51-RC1>, 2021

This is interesting paper, which is mostly well done, and only minor revision is requested.

Thank you.

Comments:

Figure 3: Right and left columns in figure, its capture and body of text do not agree each other.

This was indeed a mistake, it's corrected now.

Lines 181-187: You describe what is in panels 3d and 3h but no results which follow from these figures are presented.

We actually couldn't find any clear indication of a relationship between the dates of the mean zonal wind reversal and the different events occurring in the atmosphere. A corresponding statement is between lines 233-235. What was missing and is now added to the manuscript is the equivalent statement for mid-latitudes. Thanks.

Figure 5: Why is break in 2008; visual inspection of Fig. 5 suggests rather 2006. However, I agree with you that it is not possible to determine the break point quite accurately and your interval 2008 ± 2 years includes year 2006.

We detected the year 2008 with a second degree polynomial fitted by the least square method, explained in lines 201-202.

Wording and significant misprints:

Line 107: "Juliusruh PPR" should be "Juliusruh PRR"

Line 266: "leafed length" should be "leafed season length"

Line 331: "summerl length of" should be "summer length or"

Thank you, we corrected these typos.