

Thanks for the valuable suggestion.

### **Response to editor**

The only remaining point that concerns me is the following. You have stated in your response to Referee 2 that you have considered the years 2013-2020 but have included results only from 2019 because -- on the basis of your consideration of 2013-2020 -- the results from 2019 are representative of all years. But, as far as I can tell, you have not included any statement on that in the paper itself.

My recommendation is that you include such a statement in the paper itself -- it will remove uncertainty and add to the value of your paper. (If you had not checked that the results presented for 2019 were representative of many other years then this would have been a major weakness.)

You could add a statement like:

"We have presented results only for the year 2019 but have considered the entire period 2013-20 and find that the results presented are representative of all years in this range.' If you have some very strong reason for NOT doing that then please give that in your response.

We do have analyzed all the eastward waves during 2013-2020, which are shown below. It is clearly shown that the eastward planetary waves during 2019 are representative. Only the analysis results during 2019 is presented mainly due to the similar seasonal features. We also note that the wave events exhibit interannual variabilities, which would be another interesting topic and will be investigated in the future.

The statement suggested by the editor is added in the revision.

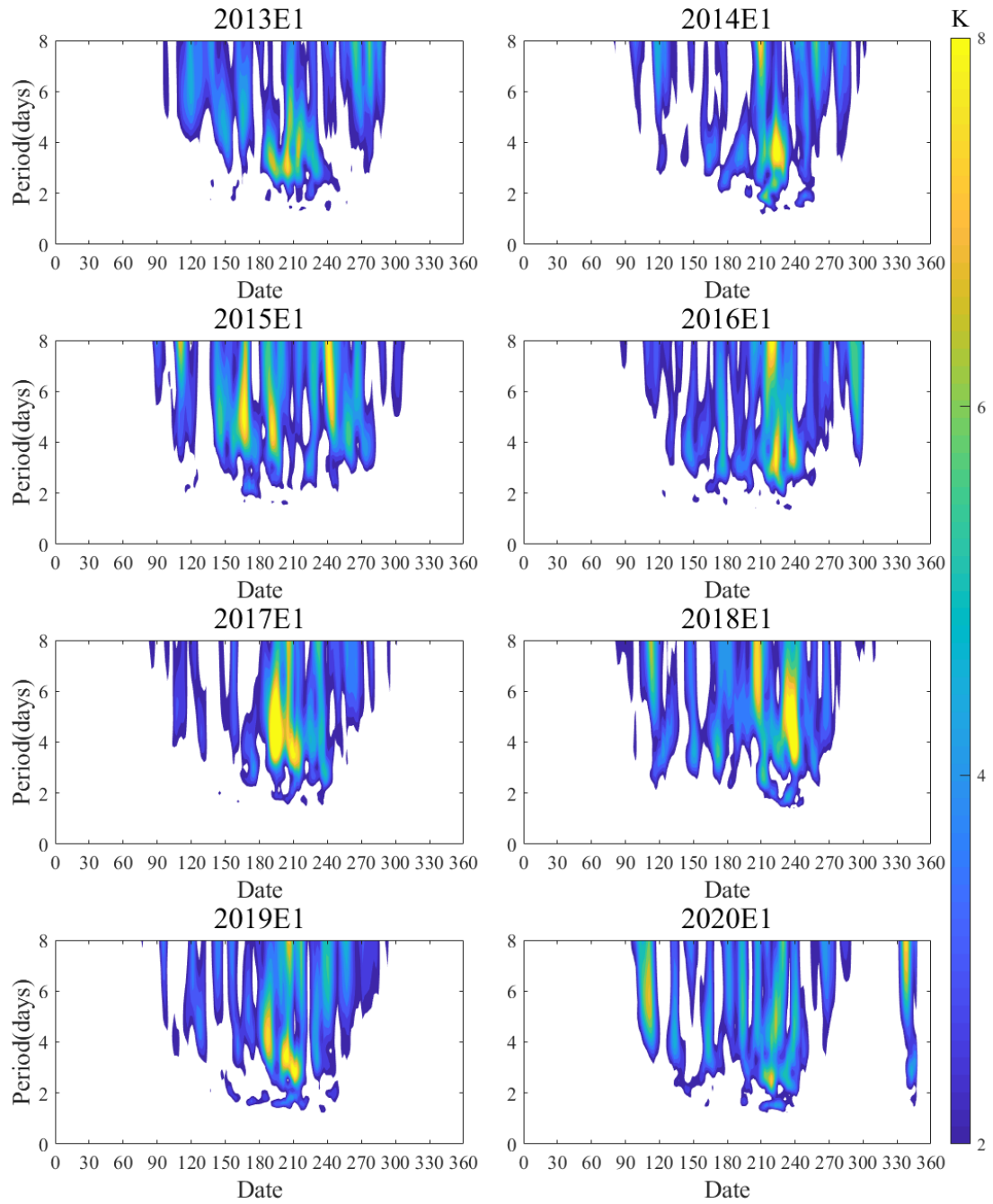


Figure S1. The temporal variations of E1 during 2013-2020 in the SH.

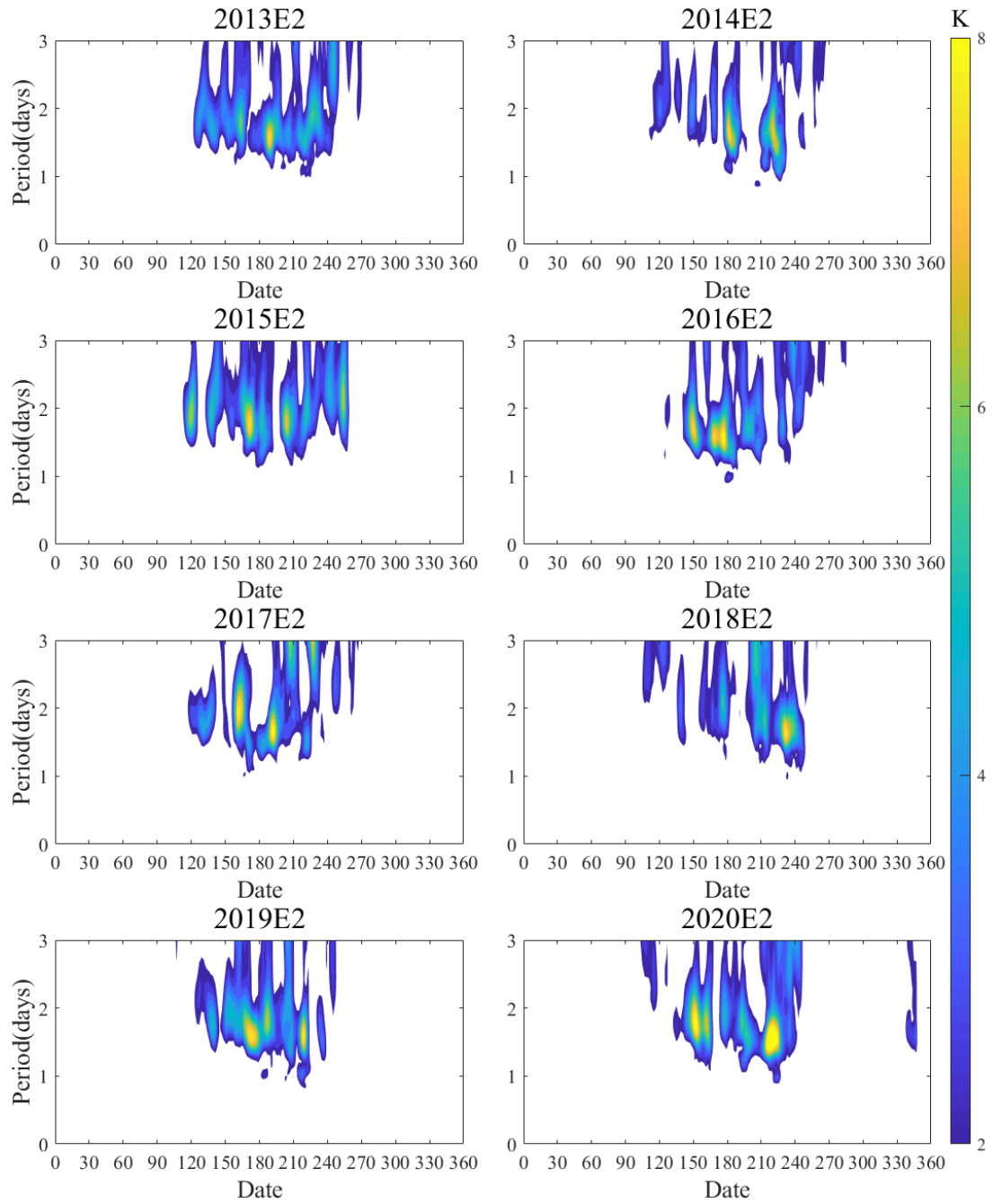


Figure S2. The temporal variations of E2 during 2013-2020 in the SH.

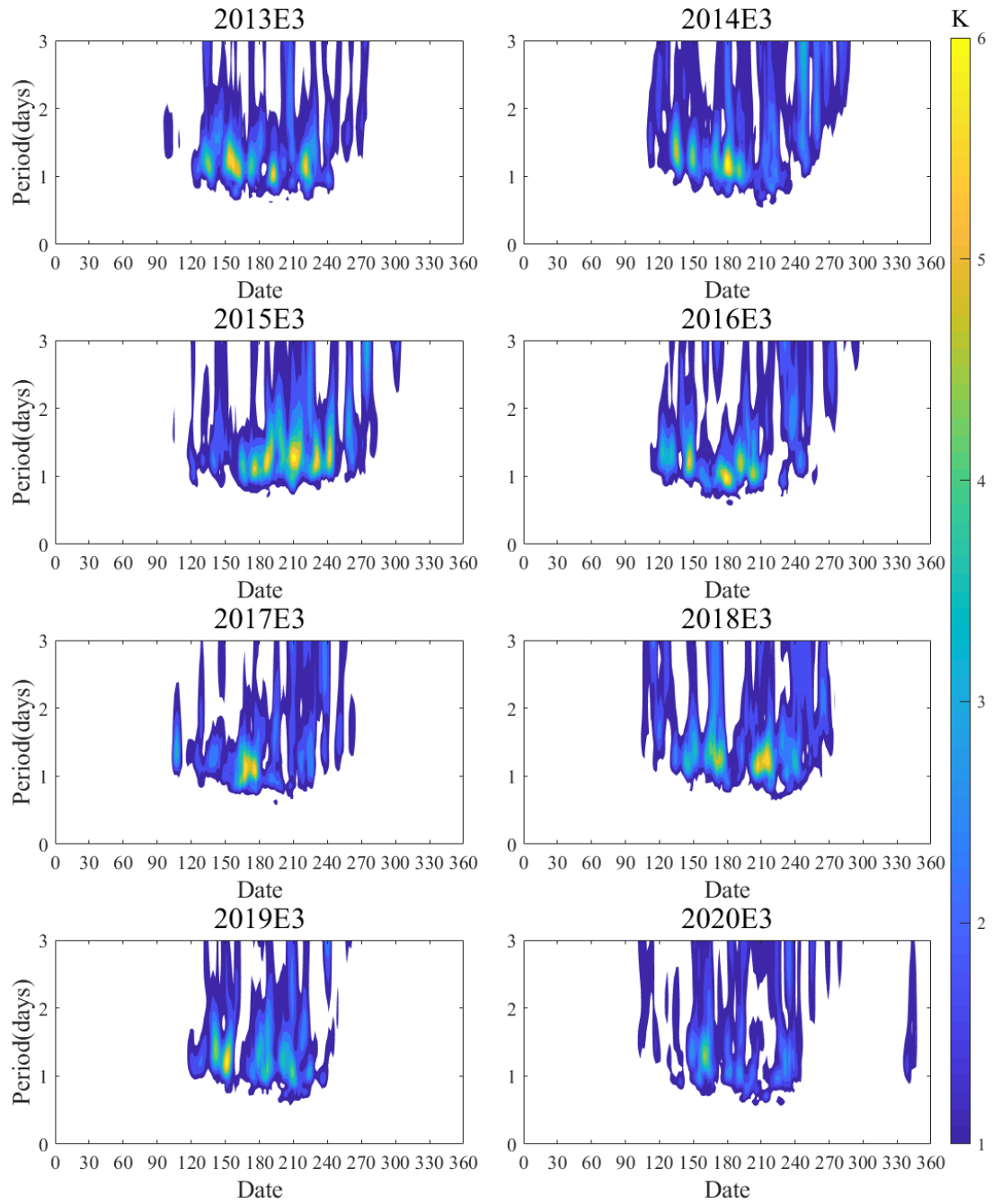


Figure S3. The temporal variations of E3 during 2013-2020 in the SH.

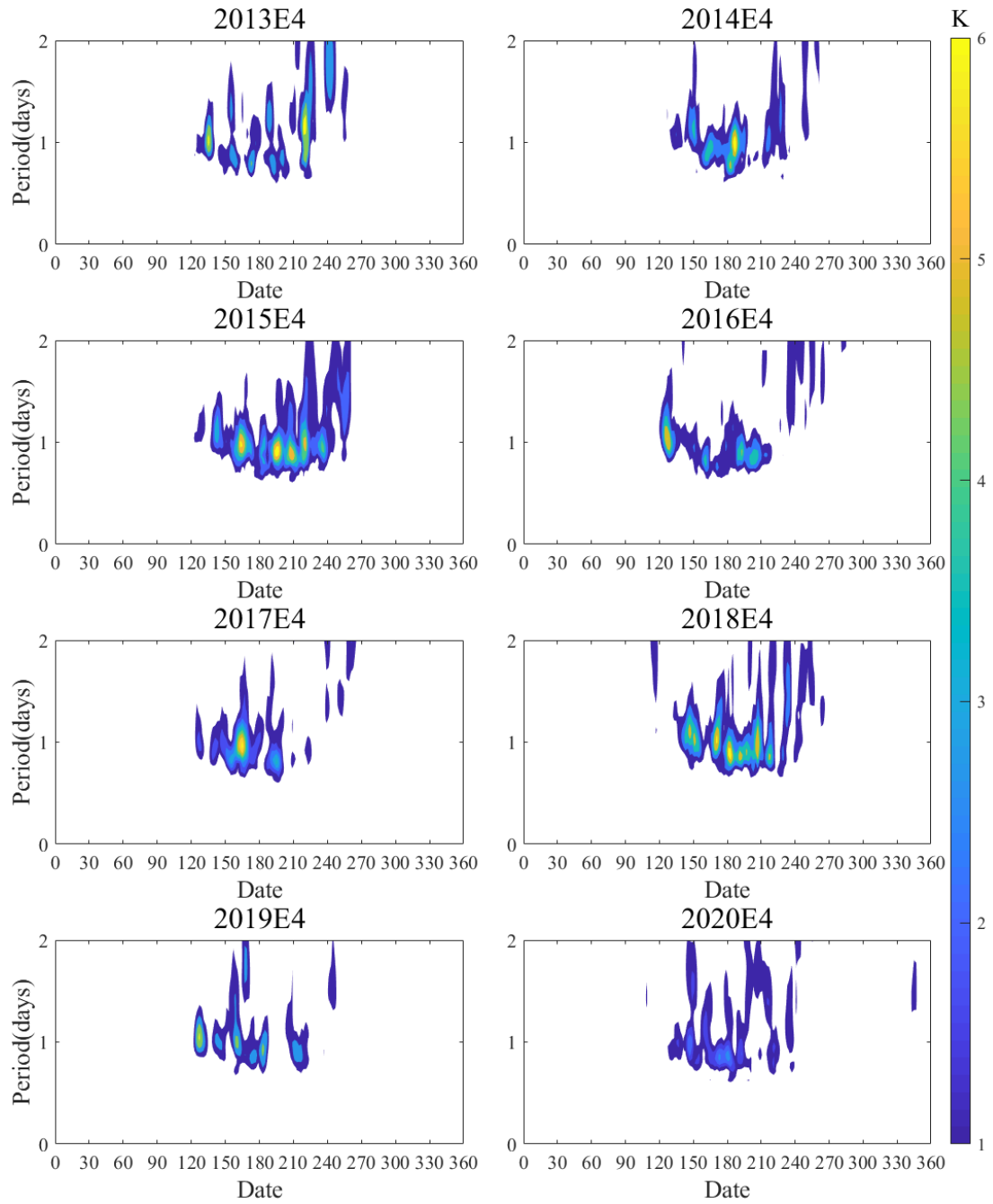


Figure S4. The temporal variations of E4 during 2013-2020 in the SH.