

Most of the previous concerns have been adequately addressed. The following issues require attention:

1. Please ensure consistent use of scientific notation throughout the manuscript. For example, it should be '5,150' or '5 150'.

2. I found several typographical errors throughout the manuscript. For instance:

- '5150m'. Please add a space between the number and the unit, like '5,150 m'.
- Each number should have a standard format. Replace '570' with '570 mm'.
- Replace 'Yellow River' with 'Yellow River Basin'.

3. Line 170: This paper provides the latest evidence of dramatic hydroclimatic changes in the headwaters of the Yellow River Basin (DOI:10.1088/1748-9326/ab9466).

4. Figure 1

- Replace 'elevation' with 'DEM' as you use DEM in the figure caption. Otherwise, using elevation in the figure caption. Keep it consistent.
- Part of the caption for subplot b is obscured.

5. Figure 3

- In subplots d and e, there is a space between the subplot number and the caption. However, in subplots a, b, and c, there is no space between the number and the caption. Please carefully review the entire manuscript to avoid these occurrences.
- Subplot e: place a space between the number and its unit.
- Subplot f and g: consistently use a range of '0 to 700' in these two plots. The values in subplot f are almost reaching the top.
- Subplot e: the ticks should align with the years instead of being placed in the middle of the years.
- In the vertical axis titles of each subplot, there should be a space between the variable and the unit. This suggestion applies to all subsequent figures. For example, Replace 'temperature(°C)' with 'Air temperature (°C)'. Use 'Air temperature' because it occurred in the figure caption and elsewhere. Please note once you define the variable name, please consistently use it throughout the manuscript.

6. Figure 4

- Figure 4 needs redesign. It is a little bit difficult to quickly understand the content of this figure according to the current information provided.
- My understanding is that the first and second columns describe sub-diurnal and daily variations in four variables at the six sites, and the third and fourth columns describe similar variations at another six sites. If my understanding is correct, please clearly indicate that each subplot in the first and second columns shares the same legend, and

each subplot in the third and fourth columns shares another legend. Consider putting two legends at the top of the figure. This suggestion applies to all subsequent figures.

- I like the way to describe variations in Air temperature, subplot e-h consistently use the same range -20 – 20. Apply this to the other three variables. This suggestion applies to all subsequent figures.

7. Section '4 Potential applications enabled from this integrated dataset': Although the author discussed potential applications, more specific examples should be provided.

8. Overall, the manuscript requires careful reading and editing, including both textual content and figures. Language also requires polishing.