

**Interactive comment on “Global Balanced Wind Derived from SABER Temperature and Pressure Observations and its Validations” by Xiao Liu, Jiyao Xu\*, Jia Yue# , You Yu, Paulo P. Batista, Vania F. Andrioli, Zhengkuan Liu, Tao Yuan, Chi Wang, Ziming Zou, Guozhu Li, James M. Russell III**

**Anonymous Referee**

**General Comments:** In my opinion, this paper is an instrumental compilation for researchers working on this topic, but it will also be of value to workers not very familiar with the details of the topic. The way the methods, results, and interpretations are presented is concise but provides sufficient details on the individual aspects. It is straightforward to follow the authors' reasoning and the explanations for their approach, and the implications for future research. Compilations like this one will always be crucial and help make data more approachable to researchers. Following the guidelines provided for reviewers, the data is of high quality. The paper is appropriate to explain the database provided. The length and structure of the article are appropriate, the language is consistent and precise, and the figures and tables are correct and of high quality. Overall, I would rate this manuscript "excellent" and think it deserves publication.

**Specific Comments:** The only specific comment I have is related to chapter 2.3. In lines 154-169, the wording could be improved. The continuous wind dataset is constructed based on the predictor variables, which are calculated by the multiple linear regression by considering the predictors, including constant of 1, the wind data in segment b, oscillations with periods of 12, 6, 36, 24, 4, and 3 months. It would be better to discuss the ability of the MLR method to capture the variation of wind, which could improve the rationality of data processing methods. For instance, one may wonder how much of the variation in the raw data in each segment could be explained by the

reconstructed data based on the MLR predictors.

**Technical Corrections:**

A short list of typos/inconsistencies:

L. 167: The sentence should be rewritten.

L. 207-208: “can be seen both in both BU and MerU” --> “can be seen in both BU and MerU”.