Intensive and continuous sampling is always a challenging work limited by the harsh field condition on Tibetan Plateau, which constrains our new insight into the hydrological processes especially at large catchment scale. This manuscript tries to integrate the tracer-aided hydrological model with i-GCM data at large scale catchment, which is important for the improvement of hydrological modeling work in regions with less observation data. Therefore, I recommend to accept it after the following revisions:

1. Measurement Interpolation work. When the vapor transport at the global scale, the latitude is a factor controlling the precipitation isotopes rather than longitude (Latitude effect, Dansgaard, 1964; Bowen & Willkinson, 2002). So could the authors add more explanations on why they use longitude instead of latitude in Eq.1, which would bring large uncertainty to the hydrological model results. Moreover, the evaluation of interpolation work should be quantified like R^2 or other indexes.

2. Selection of i-GCM model. As the authors claimed, there are a lot of i-GCM model currently. So why do you select the isoGCM model? In Line 182-184, the authors say the isoGCM model product showed the best performance on simulating global spatial pattern of δ18O by citing a reference of Wang et al., 2017, but I did not see it in the cited paper.

3. Correction of i-GCM. Fig 2 and Fig 3 shows that the correction is not so good except the KR catchment compared to the measurement. Some peak bias can exceed over 20‰, which would certainly influence the isotope modelling results sometimes can't capture the peak signal (Fig 9). My suggestions is that you could compare other i-GCM data which may be closer to the measurement in your study region or you had better improve your correction method. See also the comment above.

4. In this work, the modelling results by corrected-isoGSM is compared to that by interpolation from measurement other than measurement. So the authors had better replace 'measurement-forced' with 'interpolation-forced' throughout the manuscript as well as the figures. Otherwise, the readers may misunderstand the work because we think the in-situ measurement is always more reliable than the modeling results whatever physical processes are included in the model.

5. The whole model did not consider the groundwater discharge to the river. However, at the seasonal/monthly scale, groundwater is an important part recharging the river especially in the mountainous region. Please reconsider your model.

There also exists some minor points to be improved:

6. The last key word is too long and has to be shorter.

7. You'd better add N and E to the latitude and longitude in Fig. 1.

8. The subscript *i* in Eq.2 and Eq.4 represents different meaning, so you has to change one subscript in case of misleading the readers.

9. Line 187: before being used.

10. The scale of Y-axis should keep in uniform for the same station in Fig.6. Also, the Y-axis of Fig 9. (a)(b)(c) had better to be the same so that the results can be easier

to compare.

11. The format of reference should be unified throughout the whole manuscript, e.g. line 52 and line 56 are not in the same citation format. Besides, the journal name should also be checked carefully in the reference list, e.g., Wang et al., 2017.