Thank you very much for your helpful comments to improve this manuscript.

Comments: This manuscript produced a downscaled temperature and rainfall dataset by comprehensive methods. As the author points out, such high-resolution dataset is very valuable for research in related fields, especially revealing the effects of extreme temperature and precipitation events on plant growth, etc.

However, I am more concerned about how to interpolate data in mountainous regions (such as the Qinghai-Tibet Plateau), as we all know that the topography in these areas is complex, and the interpolation accuracy in mountainous regions may be relatively low compared to other regions. Did the authors perform different methods in these regions to ensure high accuracy? I'm interested in whether this dataset has improved interpolation accuracy in mountainous regions compared to other existing datasets.

In addition, I found that some figures in the manuscript are of poor resolution and need further improvement. ion, the MS can be accepted for publication after a medium revision.

Response: In fact, we did not perform partition processing during the interpolation process and the results show that the accuracies were lower in the Southweste region (where there are many mountain distribution areas). Calculation and interpolation by subregions may solve this problem in future studies. Analysis of the dataset in the Southwest region shows that the accuracy in this region is indeed improved compared to other existing datasets, especially rainfall (Figs. CC1-3). However, the improvement in southweste region is almost consistent with that in whole China. All figures in this MS was improved.

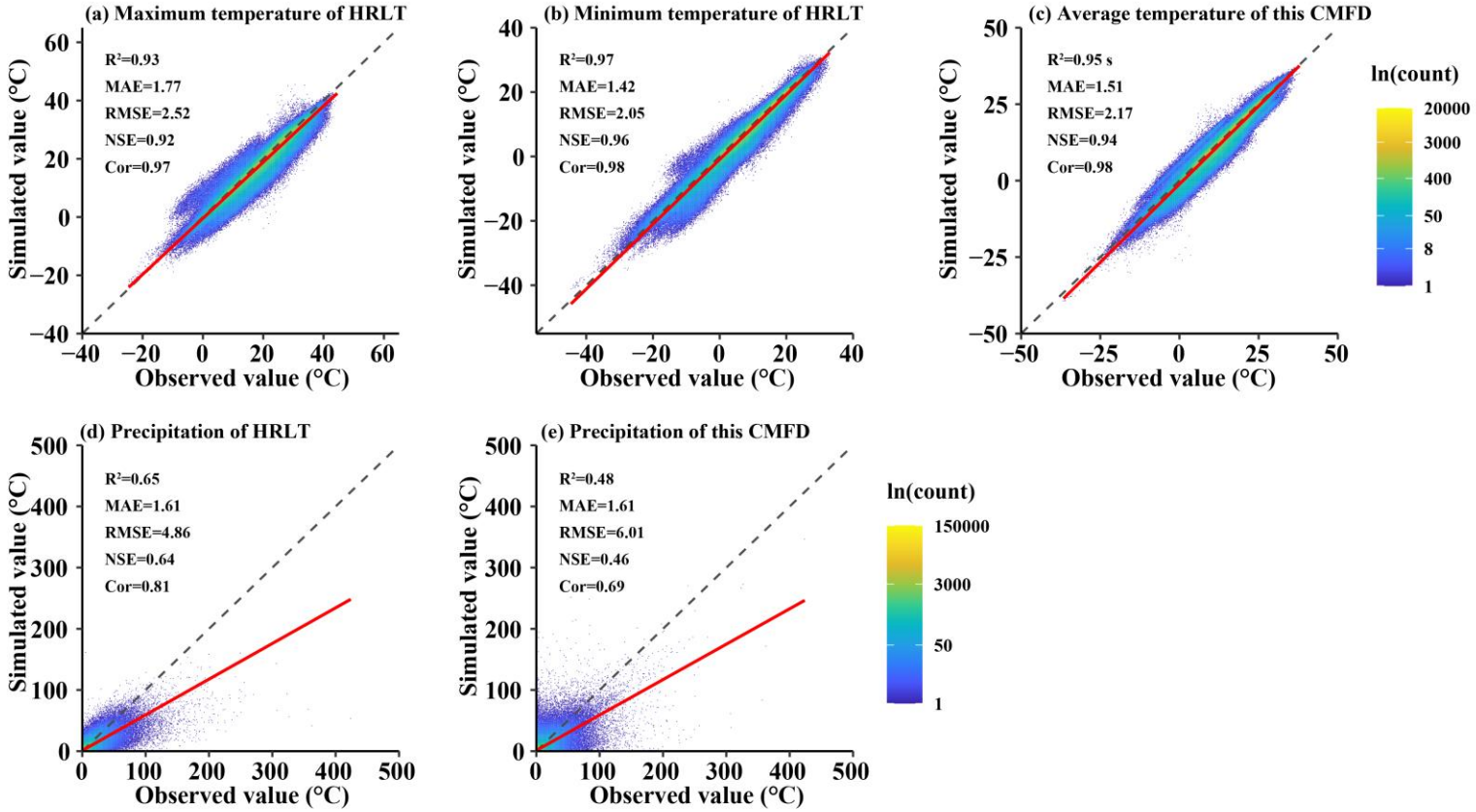

Figure CC1. Scatter density plots of daily temperature and precipitation between the estimated and observed values at meteorological stations in Southweste region for the HRLT dataset and the CMFD dataset between 1979 and 2018. The dashed line is a line with slope 1 and the red line is a fitting between the estimated and observed values. R^2 is the coefficient of determination between the estimated and observed values. MAE, RMSE, Cor, and NSE are the mean absolute error, root mean square error, Pearson's correlation coefficient, and Nash-Sutcliffe modeling efficiency, respectively.

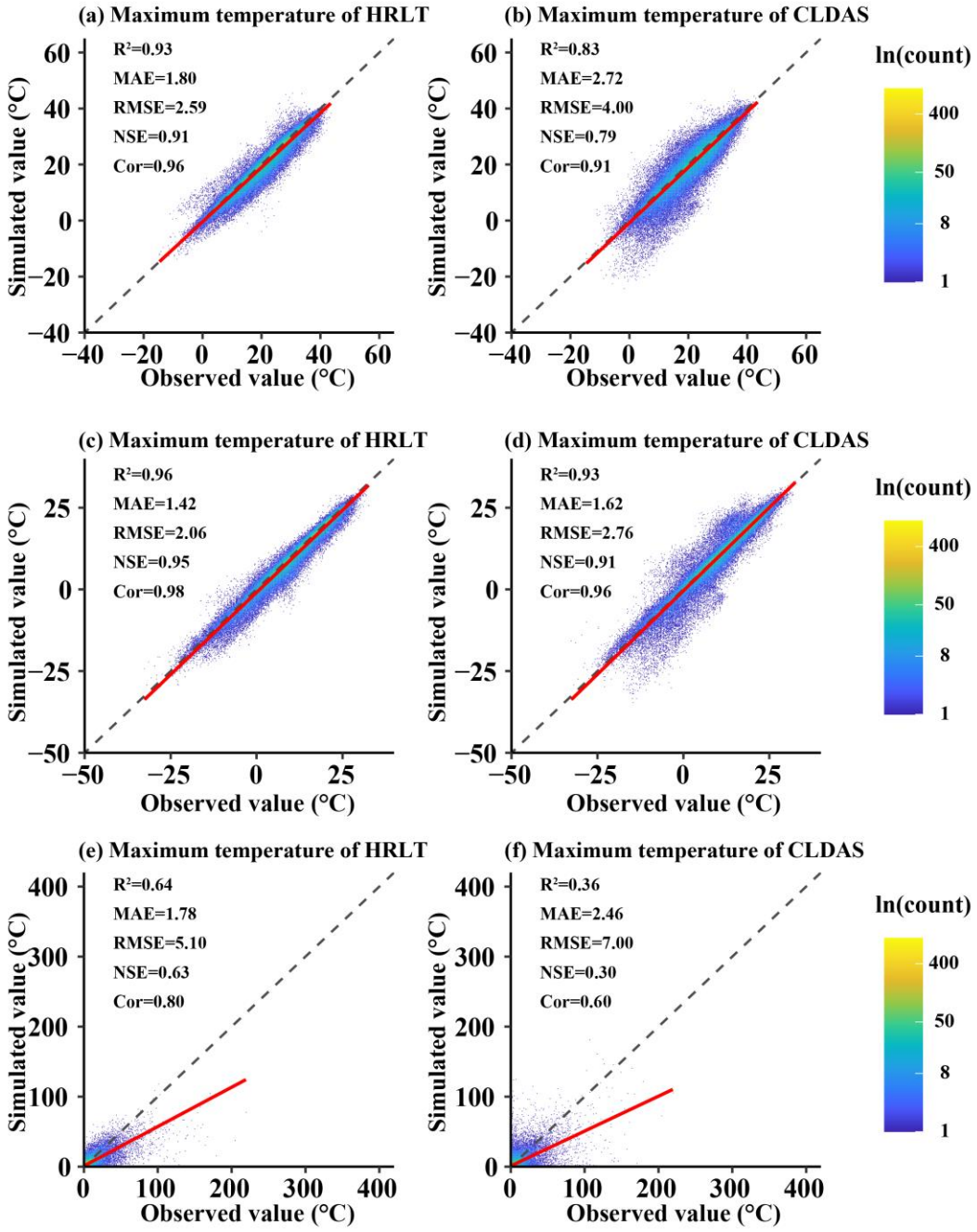

Figure CC2. Scatter density plots of daily temperature and precipitation between the estimated and observed values at meteorological stations in Southweste region for the HRLT dataset and the CLDAS dataset between 2017 and 2019. The dashed line is a line with slope 1 and the red line is a fitting between the estimated and observed values. R^2 is the coefficient of determination between the estimated and observed values. MAE, RMSE, Cor, and NSE are the mean absolute error, root mean square error, Pearson's correlation coefficient, and Nash-Sutcliffe modeling efficiency, respectively.

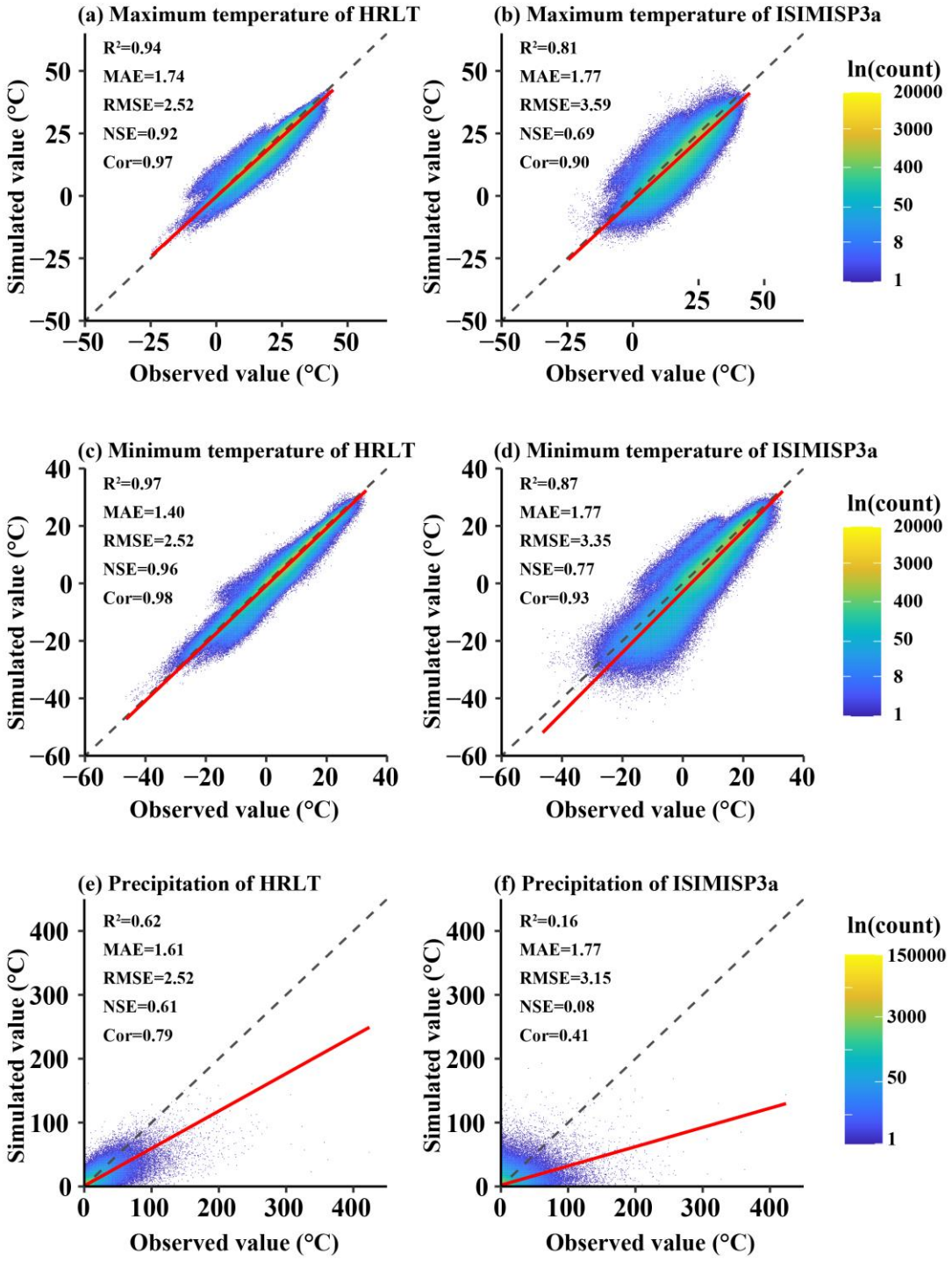

Figure CC3. Scatter density plots of daily temperature and precipitation between the estimated and observed values at meteorological stations in Southweste region for the HRLT dataset and the ISIMISP3a dataset between 1961 and 2016. The dashed line is a line with slope 1 and the red line is a fitting between the estimated and observed values. R^2 is the coefficient of determination between the estimated and observed values. MAE, RMSE, Cor, and NSE are the mean absolute error, root mean square error, Pearson's correlation coefficient, and Nash-Sutcliffe modeling efficiency, respectively.