

## ***Interactive comment on “Remapping precipitation in mountainous area based on vegetation pattern” by Xing Zhou et al.***

### **Anonymous Referee #1**

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Overall: Data fusion across satellite and gauge precipitation data has been widely concerned around the world in the last decade and also has been investigated by many studies in China. In this study, the authors aim to develop a fusion framework to improve the precipitation estimation in mountainous areas. The framework is then applied to the Nu river basin, a place with high altitude and complex topography and also with distinctive climate. From this perspective this study is meaningful. I would suggest that this paper be accepted with a few minor revisions.

1. Page-7, line 158, “59 gauges are available”, which are not consistent with the number of stations in Figure 2.
2. Page-7, line 164, it is suggested that a sentence be given to describe the temporal and spatial resolution of MOD13A3 and MYD13A3 vegetation products.

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3. Page-8-9, line 208-209, “ It is also noted that R2 values of RMI for drier years are less than wetter years. . . . .”. Time-lag effects of vegetation responses to precipitation can be considered to explain this phenomenon.
4. Page-12, line 299, “the negative regression coefficient of temperature in RME+T indicates that precipitation decrease as the temperature increase”. I don't agree that your explanation of negative regression coefficient of temperature shows that that precipitation decreases as the temperature increase.
5. Some detailed should be paid more attention. For example, line 191, correct website should be given; In Figure 2, legend of DEM should not be 0 in this region.

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