Chen et al. generated high-resolution (~1 km) explicit maps of above- and belowground biomass) for woody vegetation in China between 2003 and 2020. I believe the combined use of low-frequency microwaves and laser remote sensing data provides a more accurate estimation of biomass. Overall, the manuscript conducted good work on data collection, statistic analysis, and results presentation. This map could be important for monitoring and estimating woody biomass in China. It has the potential to serve as input or for calibration in Earth System Models. I think it is publishable if several minor issues can be addressed.

1. Line 126: for MOD44B v006- dataset need citation and description.

2. Line 144: 10 m×10 m plots were not included as the training target here. What is the plot area for the training dataset, such as mean, sd of the area?

3. Line 146: the conversion of plot level AGB and pixel-scale introduce uncertainties, you could mention it in discussion.

4. Line 156: you need to describe hyperparameter tuning for RF.

5. Line 232: 2.3 High-resolution woodland AGB mapping in China from 2003 to 2020. Why is RF simulation under 1/12 resolution instead of keeping everything at $1/120^o$

6. Line 246-250: data processing and rescaling include many assumptions which can introduce uncertainties, should mentioned in discussion.

7. Line 314: what is the data distribution of the plot sites AGB and BGB? Normal distribution or other?

8. Line 376: why does why RF of BGB show higher R2 than AGB?