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Discussions

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Interactive comment on "Modelling above-ground carbon dynamics using multi-temporal airborne lidar: insights from a Mediterranean woodland" *by* W. Simonson et al.

Anonymous Referee #2

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Very good and inspiring paper that I really enjoyed reading. It is a step ahead in the process of operationalising the use of LiDAR for quantifying AGB and Carbon fluxes. The authors use a study in central Spain with data from archive and ground data collection as an example of other research work worldwide. I liked the use of cores and dendrochronology applied to the estimation of carbon. It opens my mind personally for a lot of possible applications using the same data. Please, include a couple of sentences describing how cores are being extracted (e.g. just one core, two cores in N-S, E-W, at dbh level, at mid point from ground to base of canopy….etc). I assume most of the readers, including myself, may not get access to the reference you mentioned that supposedly describes this process. Only very minor comments at a risk of being called

picky. Table 1. Please specify whether altitude is referred to above ground or above sea level. Page 14750, I think the authors should be talking more openly about Return Periods for extreme events in years rather than probabilities. I believe the first concept is better understood and transmit a far more powerful message. The probabilities they used for their predictions are perhaps not very realistic, as the authors noticed at the end of the paper. They only contemplate fire events every 100, 250 and 500 years, whereas in Cataluña these returns periods are far shorter. I think the size of the plots (30x30m) is big enough for calibrating the system. I do not believe they may introduce important errors. In our experiments with plantation forests, 30 meters is precisely the point where accuracy levels of.

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