

# Optimizing the remote detection of tropical rainforest structure with airborne Lidar: leaf area profile sensitivity to pulse density and spatial sampling

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## SUPPLEMENTARY MATERIAL

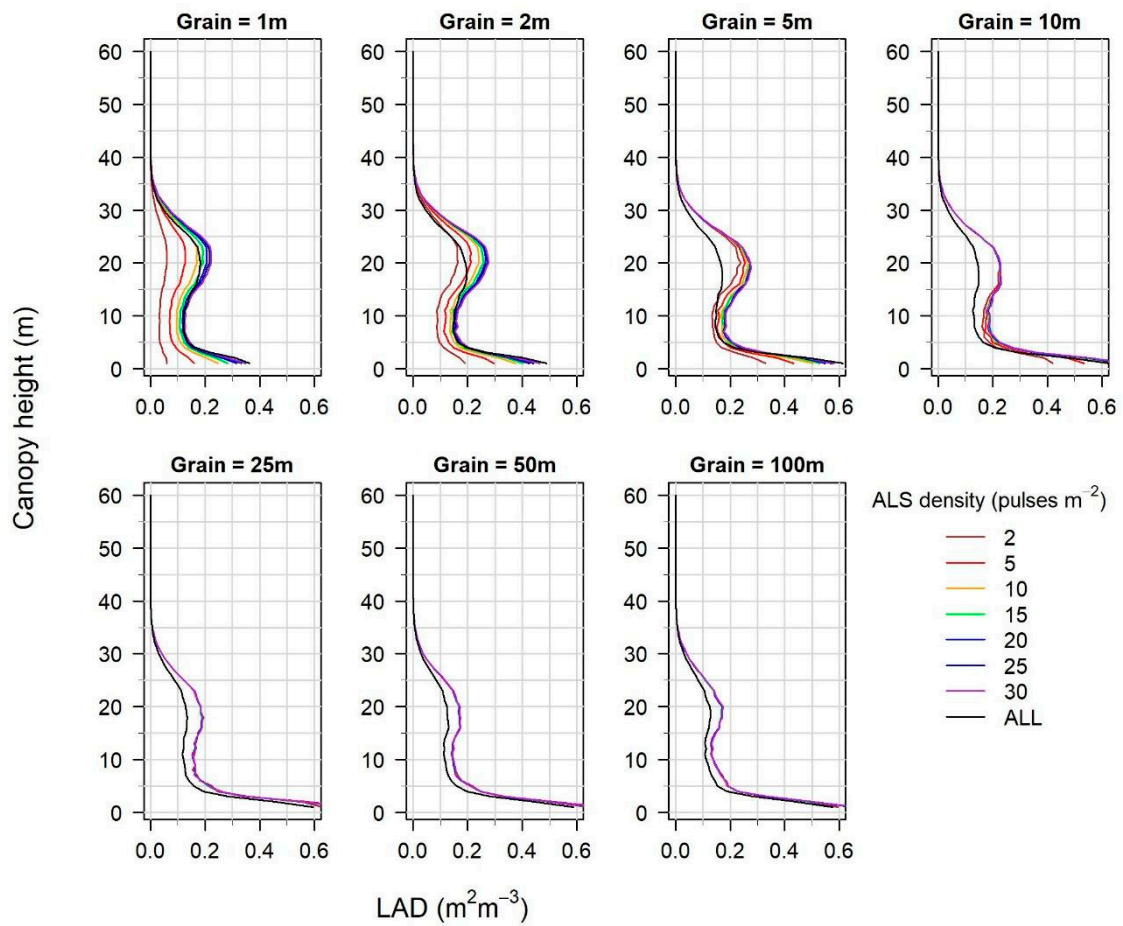
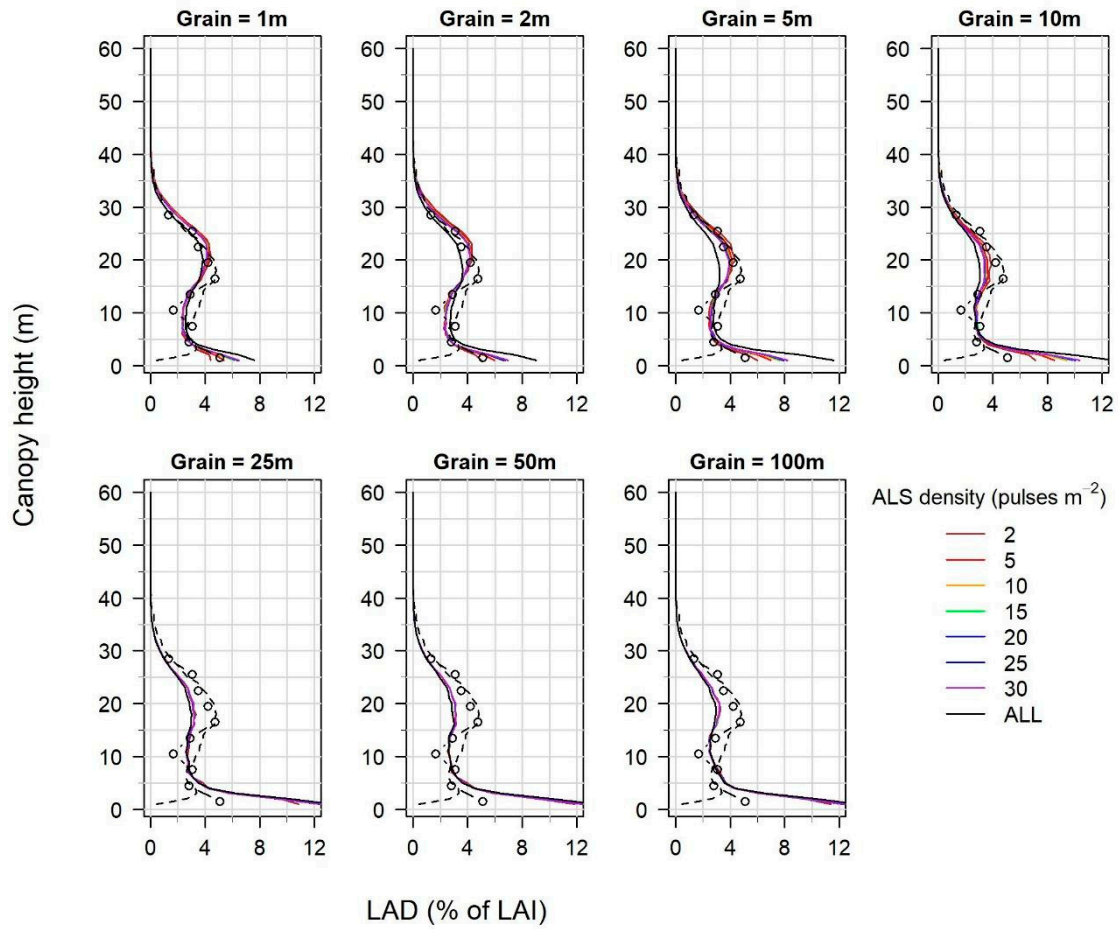


Figure S1 - Changes in the 24-hectare mean ALS profile of LAD (in absolute values;  $m^2 m^{-3}$ ) as a function of grain size (panels) and pulse density (profile colors). In this figure we added the profile using ALL returns (including multiple returns) totaling a density of 55 returns  $m^{-2}$ .



**Figure S2** - Behavior of the 24-plot mean LAD profile in relative values (% of LAI), as a function of grain size (panels). For ALS, different pulse densities are shown as different colored profile lines, but these overlap to a high degree. The black dashed line is the 24-plot mean relative LAD from the PCL at a fixed, high pulse density (2,000 pulses m<sup>-1</sup>) and at different grain sizes (panels). Open circles show the four-plot mean relative LAD profile of destructively measured field data with a fixed grain size of 100m<sup>2</sup> and no pulse density. In this figure we added the profile using ALL returns (including multiple returns) totalizing a density of 55 returns m<sup>-2</sup>.