



EGUsphere, author comment AC2  
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## Reply on CC1

Yu Zhuang et al.

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Author comment on "Dynamic response and breakage of trees subject to a landslide-induced air blast" by Yu Zhuang et al., EGU Sphere,  
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This paper performed a very interesting work about the air blast risk assessment. It proposed an applicable method to estimate the hazard associated with air blasts using the tree breakage. The analytical technique is feasible and the results appear reasonable. Though the writing is smooth and clear, some modifications will make the paper more understandable.

(1) Symbols in some equations are not well defined (Eq. 7), please define it.

**Response:** Following your valuable comment, we will make the corresponding modifications in the revised manuscript.

(2) In lines 267-278, authors performed a new comparative simulation. Some hypothesis appears to have changed. Please make a clearer statement to make readers have a better understand here.

**Response:** Many thanks for your valuable comment. As we stated in Lines 269-274, our proposed model accounts for the impacts of large tree deflection (Sorry, not large deformation): eccentric gravity and modeling of air blast force regarding the wind-tree relative motion and geometric nonlinearities. To investigate the impacts of these factors and confirm the necessity of considering large deflection, a comparative analysis is needed to make readers have a better understand. Therefore, we performed a comparative analysis without accounting for the hypothesis of large tree deflection. The comparative analysis in the absence of large tree deflection provides two main contributions here: (1) highlight the impact of large tree deflection on the air blast assessment; (2) validate the proposed model (both analyses show high agreement in the case of a very low air blast loading, as shown in Fig. 6).