



The development of event throughfall under birch and pine trees regarding the raindrop size distribution

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The process of rainfall distribution by vegetation is influenced by meteorological and vegetation variables, describing properties of rainfall event and characteristics of the trees, respectively. Meteorological variables usually changes with the development of the rainfall event. Therefore, we have analysed the influence of changes in rainfall microstructure on throughfall at the rainfall event level. Throughfall and rainfall properties were measured on a study plot with birch (*Betula pendula*) and pine (*Pinus nigra*) trees in city of Ljubljana, Slovenia from 1 January 2014 to 30 June 2017. From all detected events five representative ones were selected and closely analysed. The increase in drop diameter and fall velocity during a rainfall event instantaneously increased throughfall under pine trees between 25% and 47%, whereas no such changes were observed under birch trees. Various response of the tree species may be the result of different vegetation properties. Additionally, throughfall under pine trees exceeded rainfall in the open after an occurrence of larger and faster drops when the canopy was already saturated.