



Hail and Heavy Rain Events Measured by Videodisrometer in Prague, Czech Republic

Zuzana Chládová (1), Ondřej Fišer (1,2), Karel Pitaš (1,2), and Kateřina Skripníková (1)

(1) Department of Meteorology, Institute of Atmospheric Physics CAS, Boční II/1401, Prague, Czech Republic, (2) Faculty of Electrical Engineering and Informatics, University of Pardubice, Čs. Legií 565, Pardubice, Czech Republic

In this contribution we present hail and heavy rain events from the 2D videodisrometer measurements. Our videodisrometer, now located at the Institute of Atmospheric Physics in Prague, was delivered from the Joanneum Research in Graz, Austria. Heavy rain measurement is presented by equivolumetric hydrometeor diameter, Drop Size Distribution (DSD), rain rate, fall velocity of raindrops and hailstones and drop oblateness. For this contribution we processed and analysed the 2010–2017 period. Our measurement is performed continuously. Measured DSD and Hail Size Distribution (HSD) is parametrised and compared with the usual DSD analytical models (Exponential, Gamma model in the rain case and Cheng-English model in the hail case). The size of hailstones is compared with the size of raindrops and this comparison is discussed. The determination of rain and hail kinetic energy, being important for the soil erosion estimation, is also demonstrated.