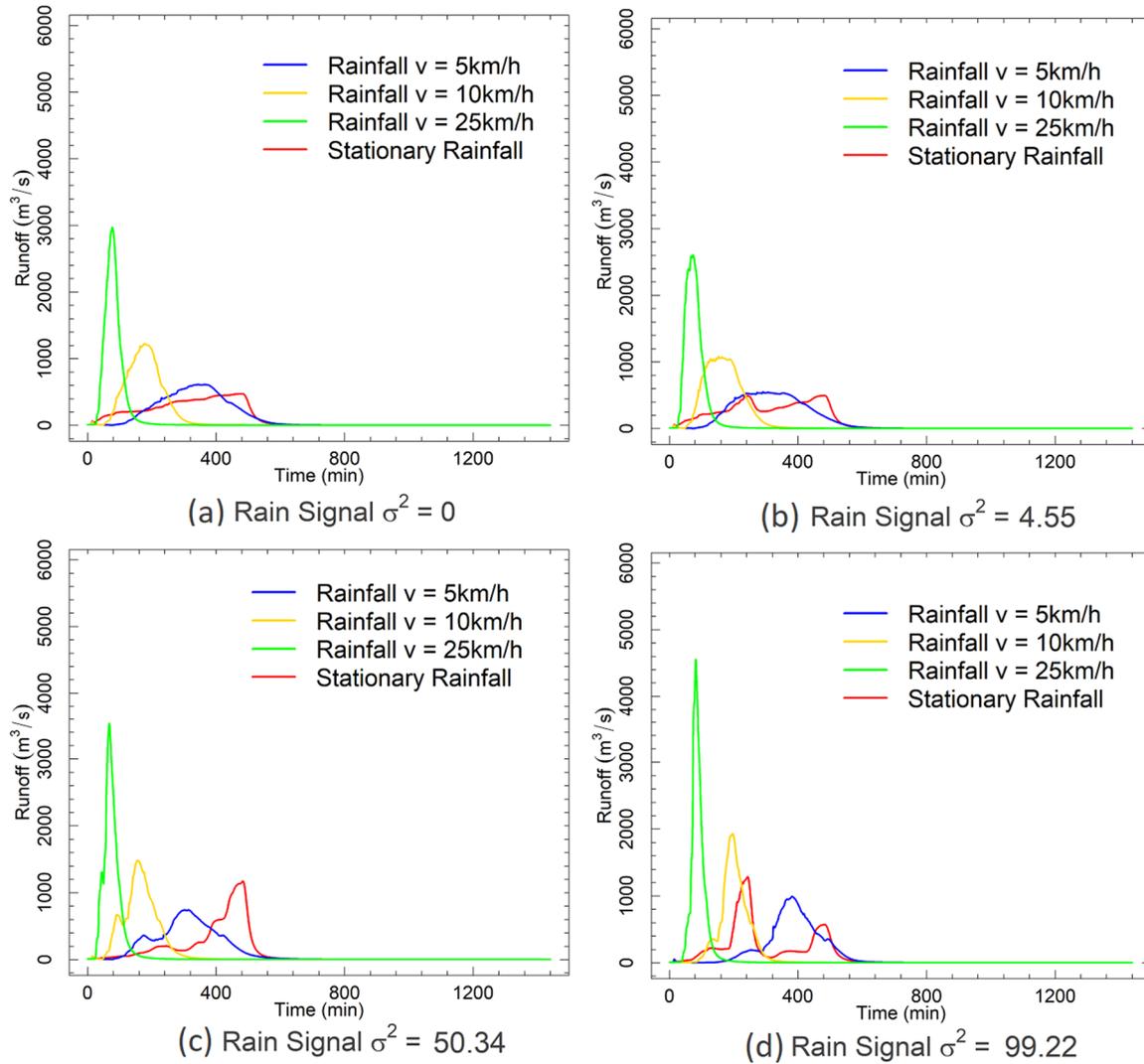


## Supplementary Material



**Figure S1.** Hydrographs (at measuring point A) for four generated rains (Figure 3a, b, e & f) under stationary and moving setups with velocities  $v=5\text{km/h}$ ,  $v=10\text{km/h}$ ,  $v=25\text{km/h}$  with a movement direction from west to east under the storm definition provided by Ogden et al. (1995), in which the intensities of the storms are proportional to their velocity.