

| Response | Fixed effects | | | | Random effects | |
|---|---------------|------------------------|-------------|-----------------------|-------------------------|------------------------|
| variable | Thies | | Parsivel | | Mast | Residual |
| | coefficient | <i>p</i> value | coefficient | <i>p</i> value | SD | SD |
| Low rainfall intensity ($0.1 < I < 2 \text{ mm h}^{-1}$): | | | | | | |
| NP | 145.8 | $< 2 \times 10^{-16}$ | 136.1 | $< 2 \times 10^{-16}$ | 1.132×10^{-7} | 0.7129 |
| <i>D10</i> | 0.3481 | $< 2 \times 10^{-16}$ | 0.4723 | $< 2 \times 10^{-16}$ | 3.795×10^{-3} | 0.1758 |
| <i>D50</i> | 0.5975 | $< 2 \times 10^{-16}$ | 0.7109 | $< 2 \times 10^{-16}$ | $3. \times 10^{-3}$ | 0.1765 |
| <i>D90</i> | 0.9440 | $< 2 \times 10^{-16}$ | 0.9503 | $< 2 \times 10^{-16}$ | 0.000 | 0.1650 |
| <i>V10</i> | 1.365 | $< 2 \times 10^{-16}$ | 1.762 | $< 2 \times 10^{-16}$ | 2.189×10^{-2} | 0.2156 |
| <i>V50</i> | 2.416 | $< 2 \times 10^{-16}$ | 2.768 | $< 2 \times 10^{-16}$ | 2.189×10^{-2} | 0.2156 |
| <i>V90</i> | 3.639 | $< 2 \times 10^{-16}$ | 3.425 | $< 2 \times 10^{-16}$ | 1.145×10^{-2} | 0.1202 |
| <i>R</i> | 0.6675 | 1.659×10^{-7} | 0.6202 | $< 2 \times 10^{-16}$ | 0.000 | 0.6570 |
| ND | 24 840 | $< 2 \times 10^{-16}$ | 18 710 | $< 2 \times 10^{-16}$ | 9.824×10^{-3} | 0.5478 |
| <i>Z</i> | 21.44 | $< 2 \times 10^{-16}$ | 20.45 | $< 2 \times 10^{-16}$ | 0.000 | 0.2281 |
| <i>E</i> | 9.434 | $< 2 \times 10^{-16}$ | 7.953 | $< 2 \times 10^{-16}$ | 1.113×10^{-2} | 0.4108 |
| Medium rainfall intensity ($2 < I < 10 \text{ mm h}^{-1}$): | | | | | | |
| NP | 519.2 | $< 2 \times 10^{-16}$ | 408.1 | $< 2 \times 10^{-16}$ | 3.144×10^{-9} | 0.4014 |
| <i>D10</i> | 0.3122 | $< 2 \times 10^{-16}$ | 0.4944 | $< 2 \times 10^{-16}$ | 1.681×10^{-3} | 0.1232 |
| <i>D50</i> | 0.5936 | $< 2 \times 10^{-16}$ | 0.8246 | $< 2 \times 10^{-16}$ | 7.793×10^{-4} | 0.1592 |
| <i>D90</i> | 1.525 | $< 2 \times 10^{-16}$ | 1.772 | $< 2 \times 10^{-16}$ | 1.203×10^{-10} | 0.1268 |
| <i>V10</i> | 1.177 | $< 2 \times 10^{-16}$ | 1.893 | $< 2 \times 10^{-16}$ | 8.798×10^{-3} | 0.1666 |
| <i>V50</i> | 2.420 | $< 2 \times 10^{-16}$ | 3.133 | $< 2 \times 10^{-16}$ | 2.348×10^{-2} | 0.1587 |
| <i>V90</i> | 4.488 | $< 2 \times 10^{-16}$ | 4.147 | $< 2 \times 10^{-16}$ | 3.325×10^{-2} | 9.908×10^{-2} |
| <i>R</i> | 4.048 | 1.659×10^{-7} | 3.596 | $< 2 \times 10^{-16}$ | 1.145×10^{-2} | 0.1202 |
| ND | 13,730 | $< 2 \times 10^{-16}$ | 8,228 | $< 2 \times 10^{-16}$ | 6.932×10^{-3} | 0.3899 |
| <i>Z</i> | 34.26 | $< 2 \times 10^{-16}$ | 32.22 | $< 2 \times 10^{-16}$ | 7.137×10^{-3} | 0.1092 |
| <i>E</i> | 15.09 | $< 2 \times 10^{-16}$ | 13.95 | $< 2 \times 10^{-16}$ | 7.105×10^{-3} | 0.3521 |
| High rainfall intensities ($I > 10 \text{ mm h}^{-1}$): | | | | | | |
| NP | 1367.0 | $< 2 \times 10^{-16}$ | 829.7 | $< 2 \times 10^{-16}$ | 9.263×10^{-9} | 0.3532 |
| <i>D10</i> | 0.287 | $< 2 \times 10^{-16}$ | 0.5391 | $< 2 \times 10^{-16}$ | 0.000 | 0.1866 |
| <i>D50</i> | 0.510 | $< 2 \times 10^{-16}$ | 1.030 | $< 2 \times 10^{-16}$ | 0.000 | 0.2777 |
| <i>D90</i> | 1.525 | $< 2 \times 10^{-16}$ | 1.772 | $< 2 \times 10^{-16}$ | 1.645×10^{-2} | 0.1560 |
| <i>V10</i> | 1.015 | $< 2 \times 10^{-16}$ | 2.047 | $< 2 \times 10^{-16}$ | 0.000 | 0.2213 |
| <i>V50</i> | 2.012 | $< 2 \times 10^{-16}$ | 3.529 | $< 2 \times 10^{-16}$ | 0.000 | 0.2672 |
| <i>V90</i> | 4.992 | $< 2 \times 10^{-16}$ | 4.467 | $< 2 \times 10^{-16}$ | 0.000 | 0.1196 |
| <i>R</i> | 15.94 | 1.659×10^{-7} | 14.33 | $< 2 \times 10^{-16}$ | 2.374×10^{-2} | 0.2910 |
| ND | 10 370 | $< 2 \times 10^{-16}$ | 3,543 | $< 2 \times 10^{-16}$ | 0.000 | 0.428 |
| <i>Z</i> | 43.05 | $< 2 \times 10^{-16}$ | 40.88 | $< 2 \times 10^{-16}$ | 9.882×10^{-3} | 8.927×10^{-2} |
| <i>E</i> | 19.84 | $< 2 \times 10^{-16}$ | 20.81 | $< 2 \times 10^{-16}$ | 5.844×10^{-9} | 0.3198 |