Ground measurements and satellite observations for all the calibration and validation points.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Point No. | Dry biomass ($kg m^{-2}$) | Wet biomass ($kg m^{-2}$) | Soil moisture ($m^{3} m^{-3}$) | HH backscatters | HV backscatters | Incidence angles (degree) |
| 1 | 0.00799 | 0.08754 | 0.127239 | 0.620443 | 0.008223 | 27.1885 |
| 2 | 0.00393 | 0.04304 | 0.267865 | 0.316343 | 0.028498 | 27.1032 |
| 3 | 0.0149 | 0.16314 | 0.242614 | 0.144861 | 0.014744 | 27.0845 |
| 4 | 0.00515 | 0.05644 | 0.139916 | 0.183946 | 0.006655 | 27.02 |
| 5 | 0.00434 | 0.04754 | 0.171731 | 0.229378 | 0.006805 | 27.0479 |
| 6 | 0.01732 | 0.18974 | 0.274307 | 0.407447 | 0.021909 | 27.0271 |
| 7 | 0.0111 | 0.12154 | 0.170147 | 0.383534 | 0.008734 | 27.0894 |
| 8 | 0.03721 | 0.40754 | 0.343364 | 0.320011 | 0.020286 | 26.8304 |
| 9 | 0.06584 | 0.7211 | 0.107088 | 0.110205 | 0.008403 | 21.1371 |
| 10 | 0.09773 | 0.6371 | 0.07947 | 0.086696 | 0.006914 | 21.0813 |
| 11 | 0.12586 | 0.9439 | 0.039161 | 0.177344 | 0.007373 | 21.1235 |
| 12 | 0.22256 | 1.6691 | 0.111372 | 0.085646 | 0.004978 | 21.2044 |
| 13 | 0.24906 | 1.8679 | 0.224185 | 0.091497 | 0.006946 | 21.1843 |
| 14 | 0.23056 | 1.7291 | 0.075383 | 0.148071 | 0.01253 | 21.1276 |
| 15 | 0.19909 | 1.4931 | 0.110798 | 0.153117 | 0.009832 | 21.025 |
| 16 | 0.16399 | 1.2299 | 0.113555 | 0.082712 | 0.009516 | 21.0829 |
| 17 | 0.41859 | 2.7287 | 0.075 | 0.144633 | 0.013843 | 31.9592 |
| 18 | 0.60758 | 3.9607 | 0.119 | 0.159121 | 0.013454 | 31.8798 |
| 19 | 0.84229 | 5.4907 | 0.076 | 0.160248 | 0.011591 | 31.8639 |
| 20 | 0.71079 | 4.2917 | 0.107 | 0.208396 | 0.017317 | 31.8703 |
| 21 | 1.0908 | 7.1107 | 0.082 | 0.15254 | 0.008089 | 31.6379 |
| 22 | 0.53886 | 3.5127 | 0.1433 | 0.142494 | 0.014639 | 31.6591 |
| 23 | 1.15769 | 6.1246 | 0.379 | 0.132422 | 0.01522 | 31.8169 |
| 24 | 0.01205 | 0.13194 | 0.753 | 0.598379 | 0.014348 | 27.1802 |
| 25 | 0.00718 | 0.07864 | 0.858 | 0.56054 | 0.010941 | 27.1769 |
| 26 | 0.01246 | 0.13644 | 0.4208 | 0.184188 | 0.014659 | 27.0878 |
| 27 | 0.00839 | 0.09194 | 0.1828 | 0.2243 | 0.016958 | 27.0764 |
| 28 | 0.00962 | 0.10534 | 0.1617 | 0.230843 | 0.01999 | 27.0732 |
| 29 | 0.00394 | 0.04314 | 0.1166 | 0.154635 | 0.004993 | 27.0291 |
| 30 | 0.0019 | 0.02084 | 0.1401 | 0.131433 | 0.004617 | 27.0312 |
| 31 | 0.00678 | 0.07424 | 0.1701 | 0.170975 | 0.006162 | 27.03 |
| 32 | 0.00394 | 0.04314 | 0.1689 | 0.184585 | 0.006525 | 27.0336 |
| 33 | 0.00555 | 0.06084 | 0.4197 | 0.32861 | 0.026821 | 27.0371 |
| 34 | 0.01286 | 0.14084 | 0.1934 | 0.453664 | 0.013668 | 27.0399 |
| 35 | 0.02224 | 0.24354 | 0.3655 | 0.370459 | 0.014349 | 26.8139 |
| 36 | 0.01584 | 0.17354 | 0.2982 | 0.289838 | 0.01087 | 26.8169 |
| 37 | 0.01968 | 0.21554 | 0.2814 | 0.141431 | 0.015722 | 26.8713 |
| 38 | 0.02443 | 0.26754 | 0.3684 | 0.149793 | 0.020624 | 26.8563 |
| 39 | 0.087419 | 0.9575 | 0.638 | 0.104647 | 0.006665 | 21.1178 |
| 40 | 0.0962 | 0.7215 | 0.1007 | 0.105227 | 0.005444 | 21.1225 |
| 41 | 0.14903 | 0.9715 | 0.0606 | 0.120936 | 0.007743 | 21.0913 |
| 42 | 0.121004 | 0.9075 | 0.0846 | 0.108791 | 0.007812 | 21.0942 |
| 43 | 0.19327 | 1.4495 | 0.0585 | 0.167893 | 0.011137 | 21.1418 |
| 44 | 0.23114 | 1.7335 | 0.0419 | 0.152627 | 0.01108 | 21.1376 |
| 45 | 0.251408 | 1.8855 | 0.1633 | 0.072711 | 0.004638 | 21.2143 |
| 46 | 0.136738 | 1.0255 | 0.202 | 0.105992 | 0.008347 | 21.2181 |
| 47 | 0.190606 | 1.4295 | 0.0815 | 0.07359 | 0.00436 | 21.203 |
| 48 | 0.139138 | 1.0435 | 0.0738 | 0.081103 | 0.005024 | 21.1989 |
| 49 | 0.109537 | 0.8215 | 0.1927 | 0.107881 | 0.008487 | 21.0044 |
| 50 | 0.22847 | 1.7135 | 0.042 | 0.143742 | 0.008616 | 21.0082 |
| 51 | 0.49835 | 3.7375 | 0.0559 | 0.144683 | 0.016928 | 21.1112 |
| 52 | 0.18927 | 1.4195 | 0.0382 | 0.13543 | 0.01355 | 21.115 |
| 53 | 0.34341 | 2.5755 | 0.0833 | 0.096725 | 0.011773 | 21.0582 |
| 54 | 0.31461 | 2.3595 | 0.0581 | 0.105631 | 0.013265 | 21.0743 |
| 55 | 0.70627 | 4.604 | 0.0814 | 0.192856 | 0.01323 | 31.9515 |
| 56 | 0.67497 | 4.4 | 0.1109 | 0.198 | 0.013736 | 31.9487 |
| 57 | 0.526479 | 3.432 | 0.0985 | 0.121614 | 0.011253 | 31.8637 |
| 58 | 0.75658 | 4.932 | 0.0514 | 0.162414 | 0.01141 | 31.8661 |
| 59 | 0.60195 | 3.924 | 0.0707 | 0.127441 | 0.009791 | 31.8563 |
| 60 | 0.69123 | 4.506 | 0.0661 | 0.120812 | 0.01094 | 31.8536 |
| 61 | 0.95631 | 6.234 | 0.0589 | 0.146173 | 0.012034 | 31.6233 |
| 62 | 0.48352 | 3.152 | 0.1074 | 0.164818 | 0.012403 | 31.626 |
| 63 | 0.589067 | 3.84 | 0.1173 | 0.151315 | 0.011064 | 31.6761 |
| 64 | 0.534456 | 3.484 | 0.1144 | 0.161151 | 0.017059 | 31.6627 |
| 65 | 0.6214 | 3.752 | 0.4348 | 0.165078 | 0.014831 | 31.826 |
| 66 | 1.166288 | 7.042 | 0.4163 | 0.152524 | 0.013868 | 31.8287 |