

Water content measurements by GPR in a Lysimeter

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An experimental calibration curve to measure the water content by GPR was calculated by comparing GPR-results with Lysimeter data. GPR measurements were carried out on four Lysimeters (surface 1 m², depth 1.5m) over a vegetation period. The Lysimeters were filled with sandy soil, planted with Lucerne. The ground water tables were in 1.35 and 2.1m. The lysimeters were weighted, so that is was able to calculate the changes in water content with very high accuracy. A good correlation between the changes of the weight and the change of the reflection time of the GPR-Pulse was measured.