

Swiss FluxNet Site Lägeren



Picture credit: Markus Staudinger

Site description

The [Swiss FluxNet](#) Site Lägeren is a managed mixed deciduous mountain forest located on the steep Lägeren mountain (NW of Zurich, Swiss Plateau). The forest is highly diverse, dominated by beech, but also including ash, maple, spruce and fir trees. Eddy covariance flux measurements were started in April 2004. The site was part of the international CarboEurope IP network and the National Air Pollution Monitoring Network (NABEL). In addition to Swiss FluxNet, the site is part of the Long-term Forest Ecosystem Research (LWF) of WSL and the biological drought and growth indicator network (TreeNet) of WSL.

Tower coordinates: 47°28'42.0" N and 8°21'51.8" E, at 682 m asl.

Detailed site info: <https://www.swissfluxnet.ethz.ch/index.php/sites/ch-lae-laegeren/site-info-ch-lae/>

Measurements

Ecosystem flux measurements of CO₂, H₂O vapour are performed with the eddy-covariance method. This method is based on measurements of trace gas mixing ratios, using infrared gas analyzers (for CO₂, H₂O vapor), combined with wind speed and wind direction measurements, using 3D sonic anemometers. To resolve the short-term turbulent fluctuations in the atmosphere, very fast measurements are needed: we measure at 10-20 Hz, i.e., 10-20 times per second. To assess the energy budget of each ecosystem, also radiation sensors and soil climate profiles are installed at the site.

Sub-canopy eddy fluxes (CO₂, H₂O), soil respiration campaigns

Continuous CO₂ profile measurements.

Auxiliary micrometeorology and soil climate measurements.

Data availability

All data are openly available from the [European Fluxes Database Cluster](#) but are also part of the [Fluxnet2015](#) dataset.

Data policy

Swiss FluxNet Policy. <https://gl.ethz.ch/research/data-archive.html>

Publications

Publication list: <https://gl.ethz.ch/infrastructure/sites/laegeren.html>

Keywords:

Swiss FluxNet, Flux, Eddy covariance, Forest, Meteorological measurements, SwissForestLab

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Contact person

Prof. Dr. Nina Buchmann, nina.buchmann@usys.ethz.ch

Authors

Nina Buchmann, ETH Zurich

Lukas Hörtnagl, ETH Zurich

Related datasets

LWF Lägeren research site: <https://www.envidat.ch/dataset/lwf-lageren-long-term-research-site>