

Measure the soil water content non-invasively using cosmic-ray neutrons

Solutions for smart farming, precision hydrology and climate models



Measurement
average over 10 hectares
and 0.5 m depth



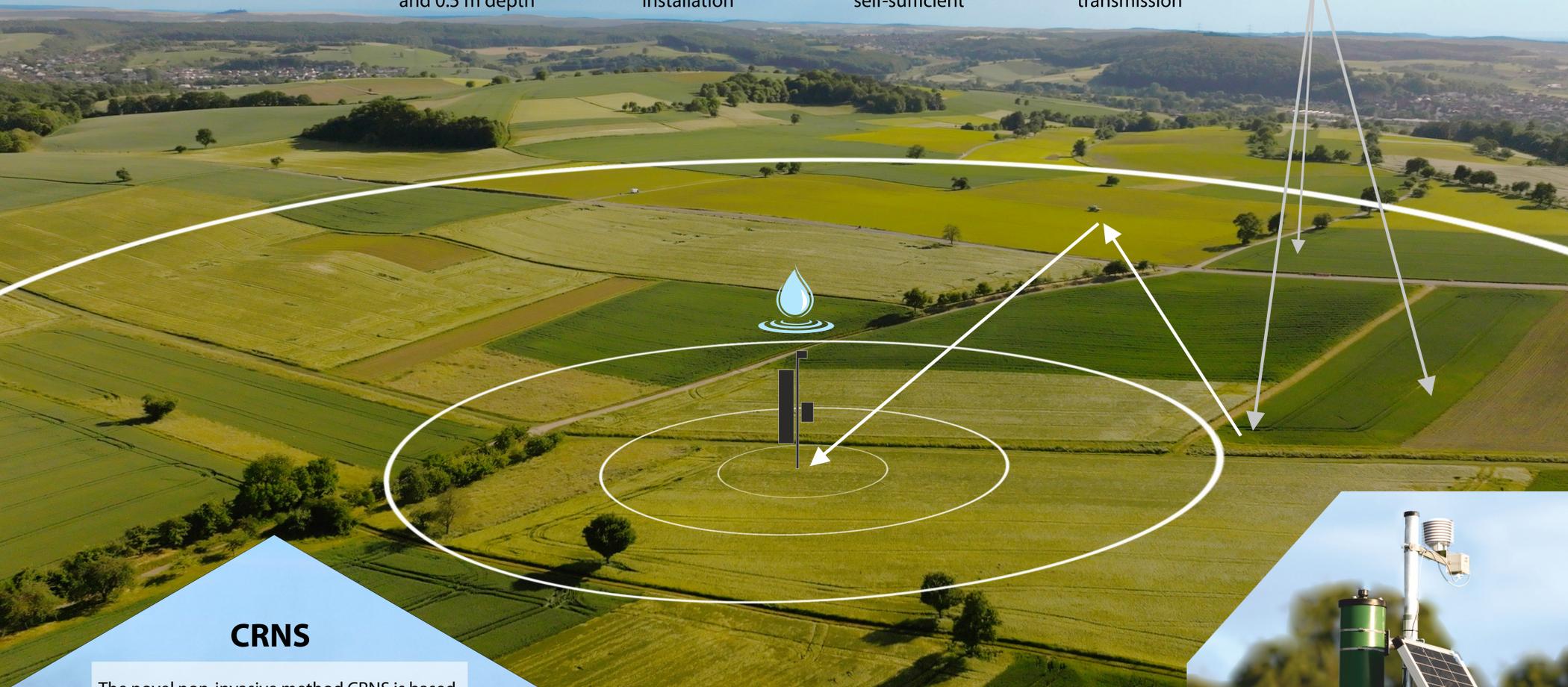
Integration
non-invasive sensor
installation



Operation
maintenance-free and
self-sufficient



Connection
real-time data
transmission



CRNS

The novel non-invasive method CRNS is based on measuring the density of a specific energy band of neutrons, which have been produced in the upper atmosphere and are reflected from the soil. Those neutrons are highly sensitive to changes in environmental water content and provide an average relation inversely proportional to the environmental water content. With our instruments we help you to analyze the plant available water, estimate irrigation needs and measure snow integrally over several hectares.

Dry climates. Smart farming. Resilient infrastructure. Using our technology up to 30 % of water can be saved in managed irrigation.

PV Panel

50 W solar power supplies a 25 Ah battery to run our system with its 0.8W

Cosmic-Ray Neutron Sensor

Coating technologies developed with our company allow a proportional counter to detect water-sensitive neutrons



System & Data Logger

The data logger receives, filters and stores data from the cosmic-ray neutron detector and other sensors. A GSM modem transmits data to a central server.