# Application Story

## *Displacement monitoring in natural environments*

## The Challenge

With climate change becoming a larger issue, scientific analysis is performed worldwide to study its effects on anything from plant growth to irrigation. With that, linear sensors that can provide long lasting, high resolution measurements in various weather settings are often required.

## The Solution

Solartron Metrology offers LVDT probes of any environmental monitoring, including:

- **Rugged Build:** Solartron probes have been tested to millions of cycles, and are built in a stainless steel casing to withstand years of abuse, including vibration and heat.
- **IP 65 or IP 67 Sealing:** Solartron Displacement LVDTs are available with IP 65 or IP 67 sealing, to protect the internal electronics from the environment.
- **Customization:** Probes and Displacement transducers can be customized to include special materials, such as marine grade steel to protect against salt water and humid environments. Specialized joints, cables and tips can also be included.
- **High Resolution**: Solartron LVDTs offer resolution up to 0.01 micron, showing the slightest change in measurement that Linear Encoders cannot provide.
- **Multiple Outputs:** Solartron offers DC, 4-20mA, TTL, and other analog output options.
- **Digital Option**: In addition, Solartron's Digital Orbit® network offers a calibrated, digital unit, and enables multiple, synchronized readings into a PC or PLC

*Solartron sensors have even been used to monitor the growth of fruit, such as apples or pomegranate, as shown here. (LVDT mounted on bottom.)*

*S-Series monitoring tree growth over time*

*Tree measurement thickness device with D03 Transducer (mounted on top). Maintained by INRAE, a French Laboratory. (INRAE, l'Institut national de recherche pour l'agriculture, l'alimentation et l'environnement | Ministère de l'Agriculture et de l'Alimentation) Manufactured by Capt. Connect. High resolution means even slightest growth can be tracked.*

Solartron Metrology

AMETEK

# Orbit® – The Total Measurement System from Solartron Metrology

The Solartron Orbit® Digital Measuring System provides a limitless set of measurement solutions, with numerous different interfaces to computers and PLC's.

S-Series

*Special probes for low temperatures*

*SI 8500*

*Compact displacement*

*S-series transducer monitoring a crack*

*Measurement of concrete compression with G-Type*

*OP Series*