

Two points to deepen the goals of the manuscript:

1. For the relevant spectral range of 200...1100 nm, the SSI(t) data are to be determined directly with a SOLACES-type device without ionization chambers and without infrared detectors. This significantly simplifies the ongoing provision of SSI(t) for the calibration of SORACER. The estimated accuracy of 0.1 W m⁻² per year is guaranteed with the reference data from the TSI instrument.
2. The absorption of chlorophyll and the reflection from the green part in the plants are very pronounced and can each be measured with high signal-to-noise ratio, as shown in the following representative example. SSI(t) data are of the mean order of $7.5 \cdot 10^{13}$ photons m⁻² s⁻¹ entering the ASSI entrance slit. Using the data of Figure 16 below, $5.3 \cdot 10^7$ cps would characterize the green and $2.7 \cdot 10^7$ cps the chlorophyll ASSI signals. By attenuating the TSI(t) by three orders of magnitude, the full dynamic range of ASSI at almost seven orders of magnitude would be available for instrument calibration and observation of global vegetation. – The green and chlorophyll data are in good agreement with other publications (see below).

Detection of sugarbeet diseases using remote sensing techniques

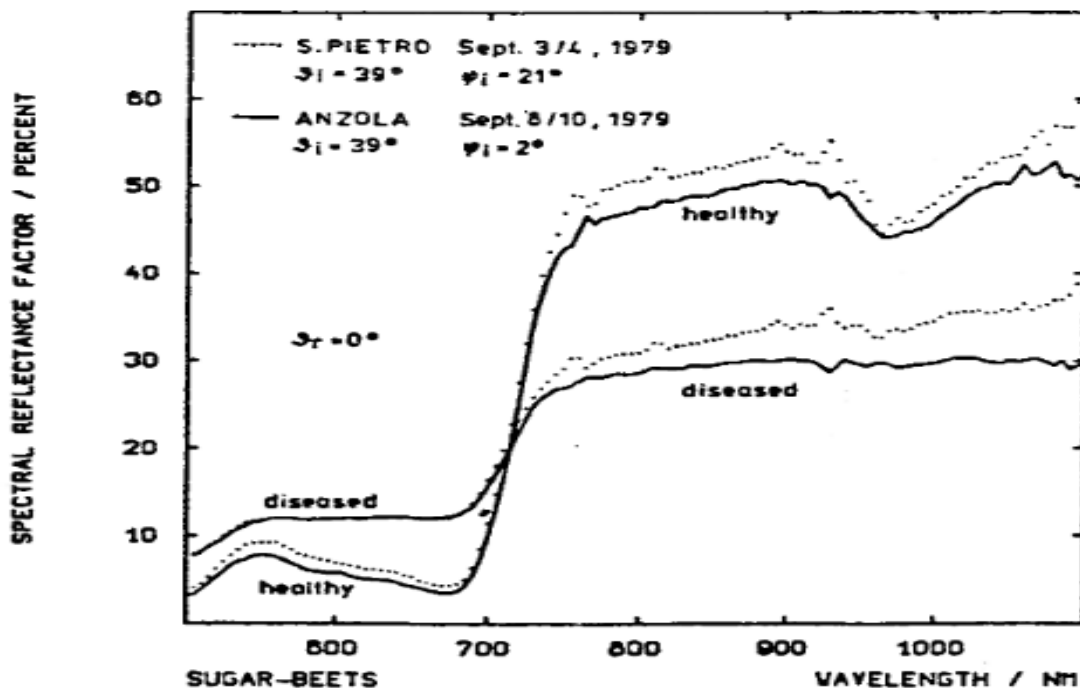
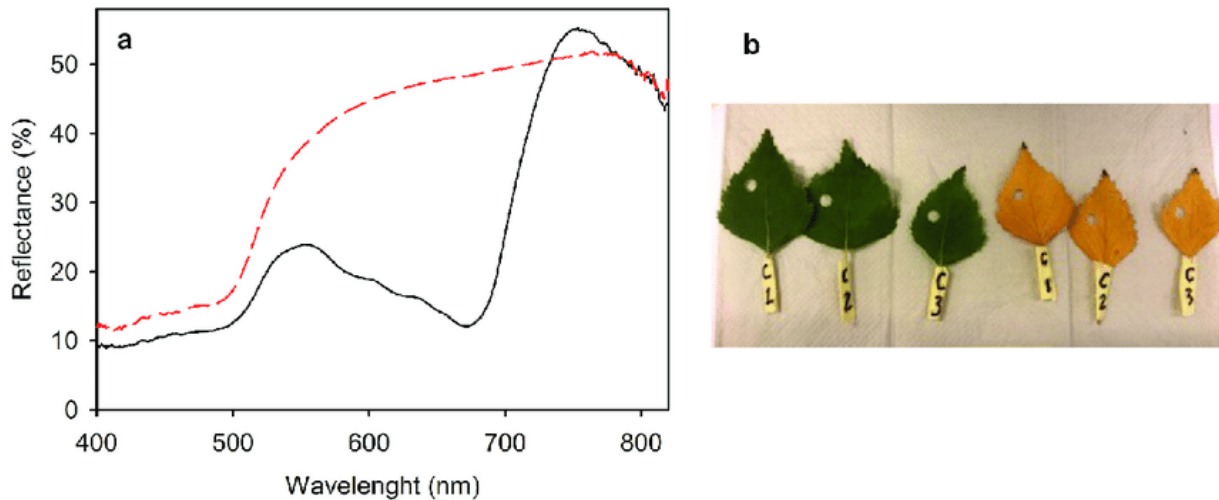


Fig. 16

- Offentliggjort: 1988
- Forfatter(e): [Europa-Kommissionen](#)
- <https://op.europa.eu/da/publication-detail/-/publication/d4a320c7-3ad9-4e7e-b763-925f81fa2df0>

Chlorophyll does not reflect green light – how to correct a misconception

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Reflectance spectra of green (black, solid line) and yellow (red, dashed line) leaves of *B. pendula* (a) and examples of the leaves (b). Specular reflectance was measured with an STS-VIS spectrometer, using a 250 W halogen lamp as a light source. For the measurement, a leaf disk was placed on a matt black cardboard at a 5 mm distance from the probe, and the probe was aligned with the surface normal. Each curve represents an average of 6 independent biological replicates, and the data have been smoothed with a moving median using a window of 9 data points.

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THE DEPENDENCE OF THE SPECTRAL SIGNATURE OF SUGARBEETS ON THE OBSERVATION LEVEL AND THE REFLECTION GEOMETRY .

https://www.isprs.org/proceedings/XXIII/congress/part7-8/102_XXIII-B7-8.pdf

With my best regards,

Gerhard Schmidtke.