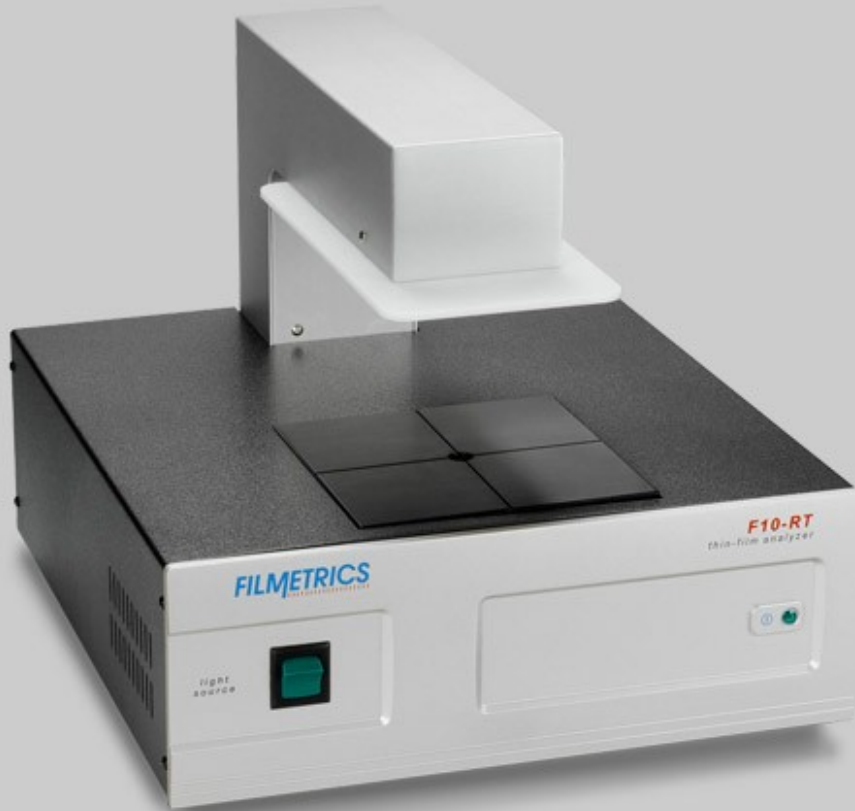


Indexy reflektance listu

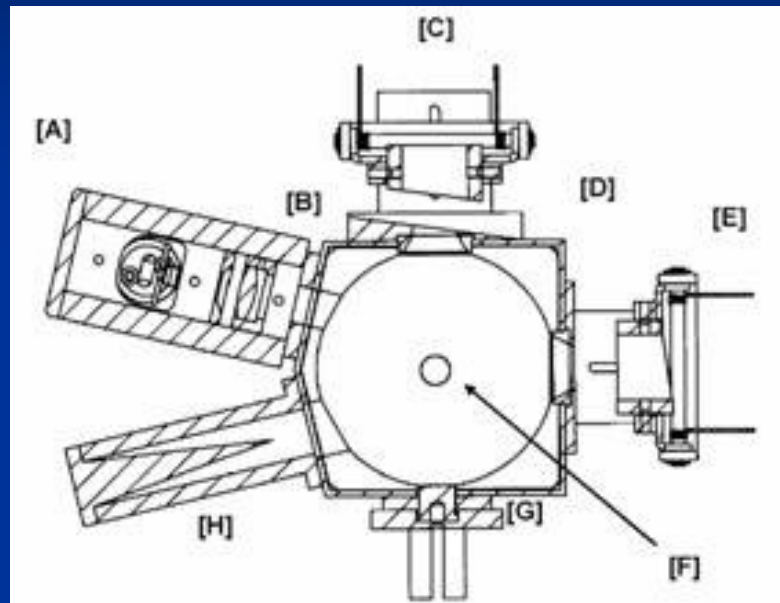
ve vztahu k fotosyntéze

Miloš Barták

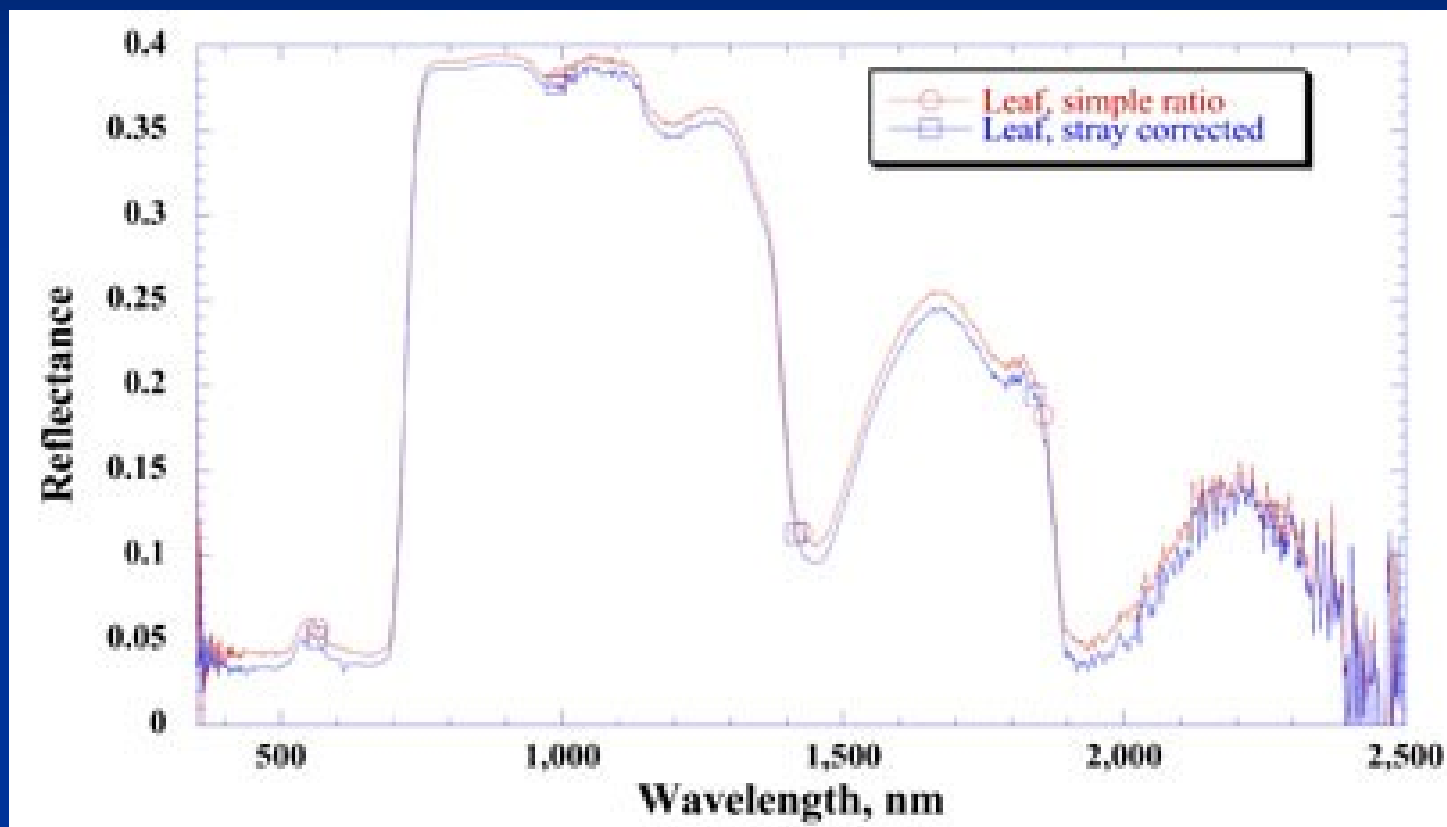
Spelktrální reflektometr - laboratoř



Integrační (Ubrichtova) sféra



Spektrální křivka (reflektance)

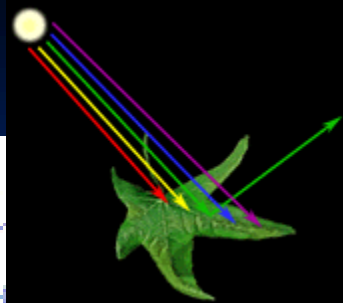


Měřicí přístroj (dle Gamon)



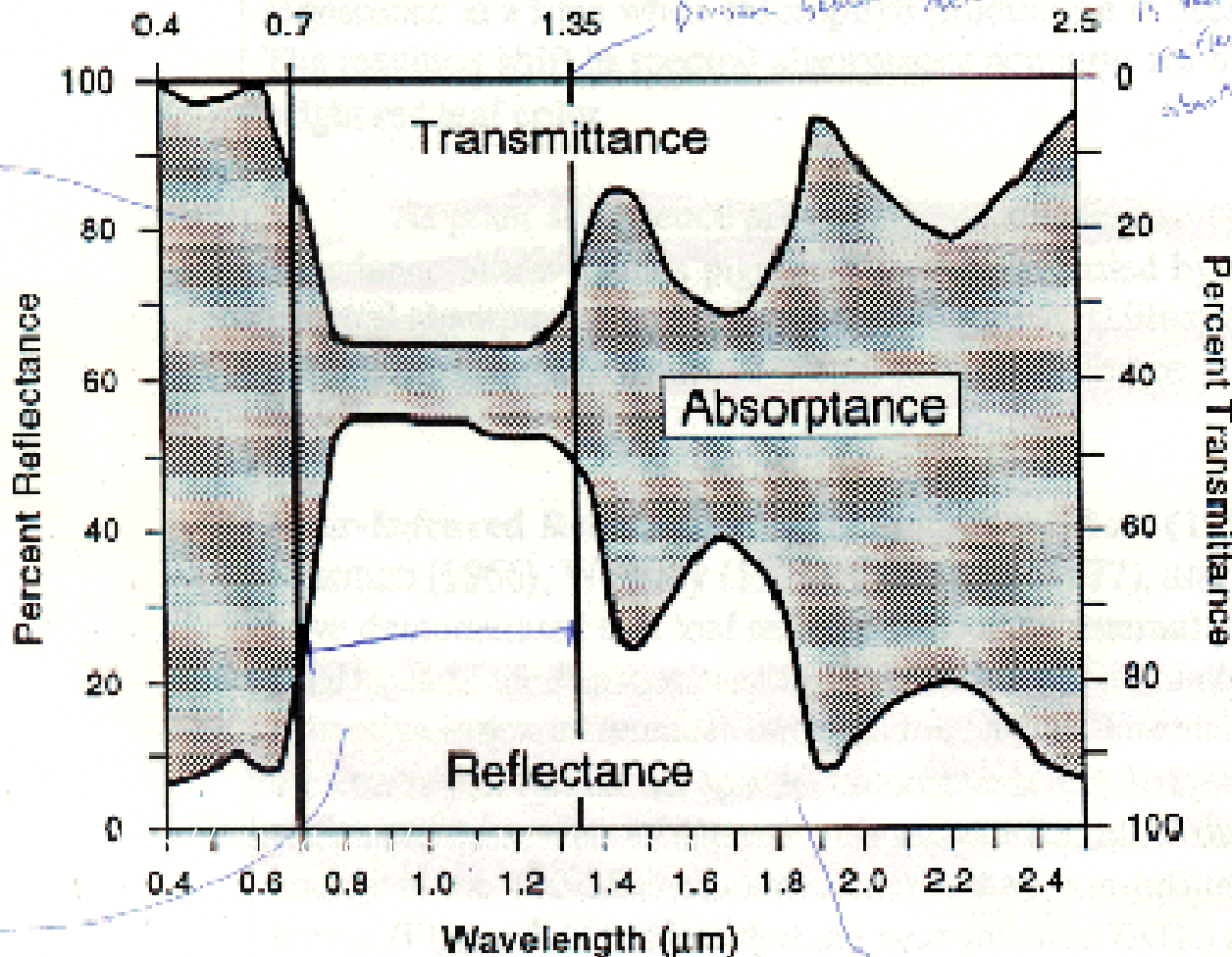
spektrometry





Spectral Partitioning by Vegetation

2.7



Domain between near and middle infrared is that vegetation reflected here

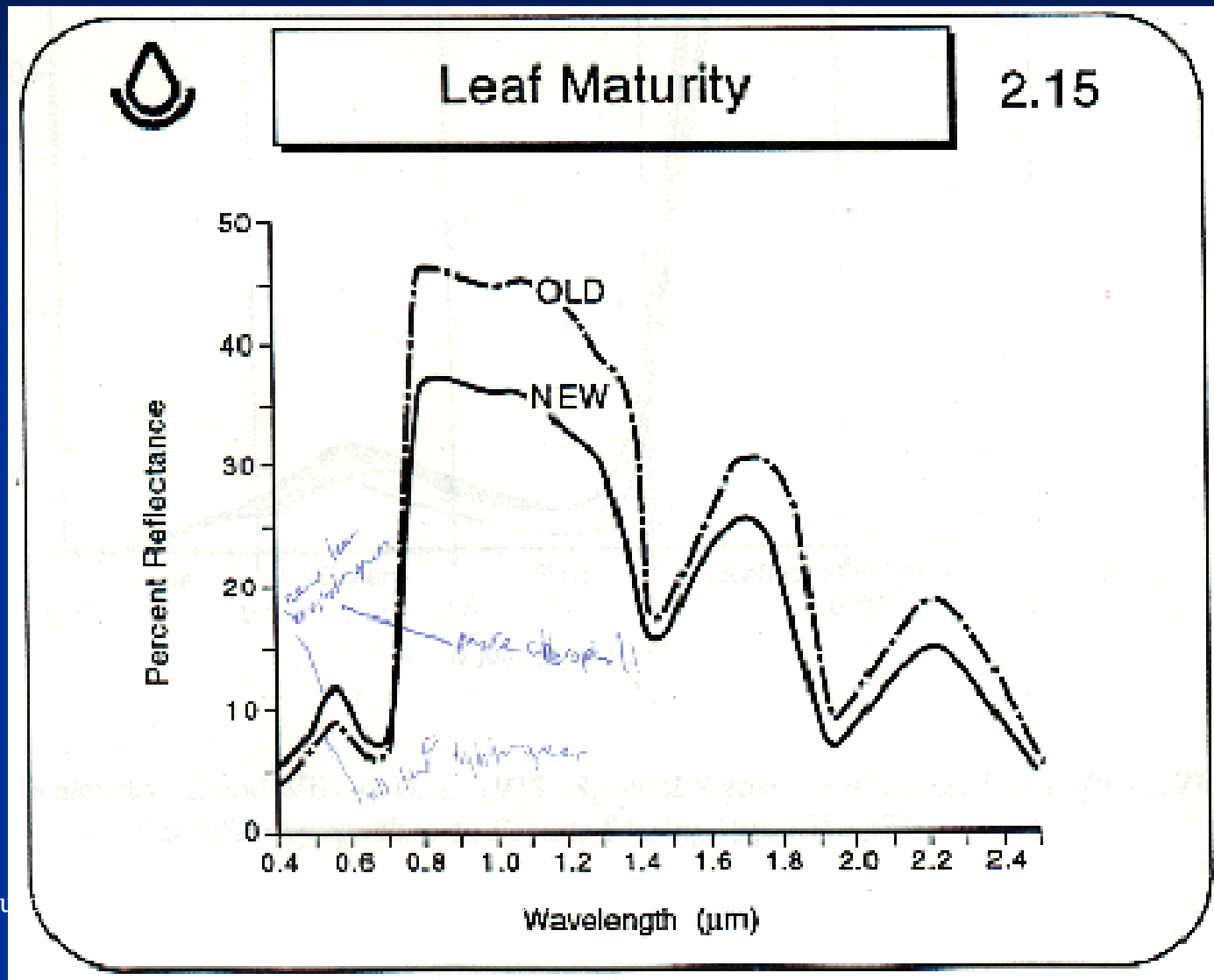
red

water

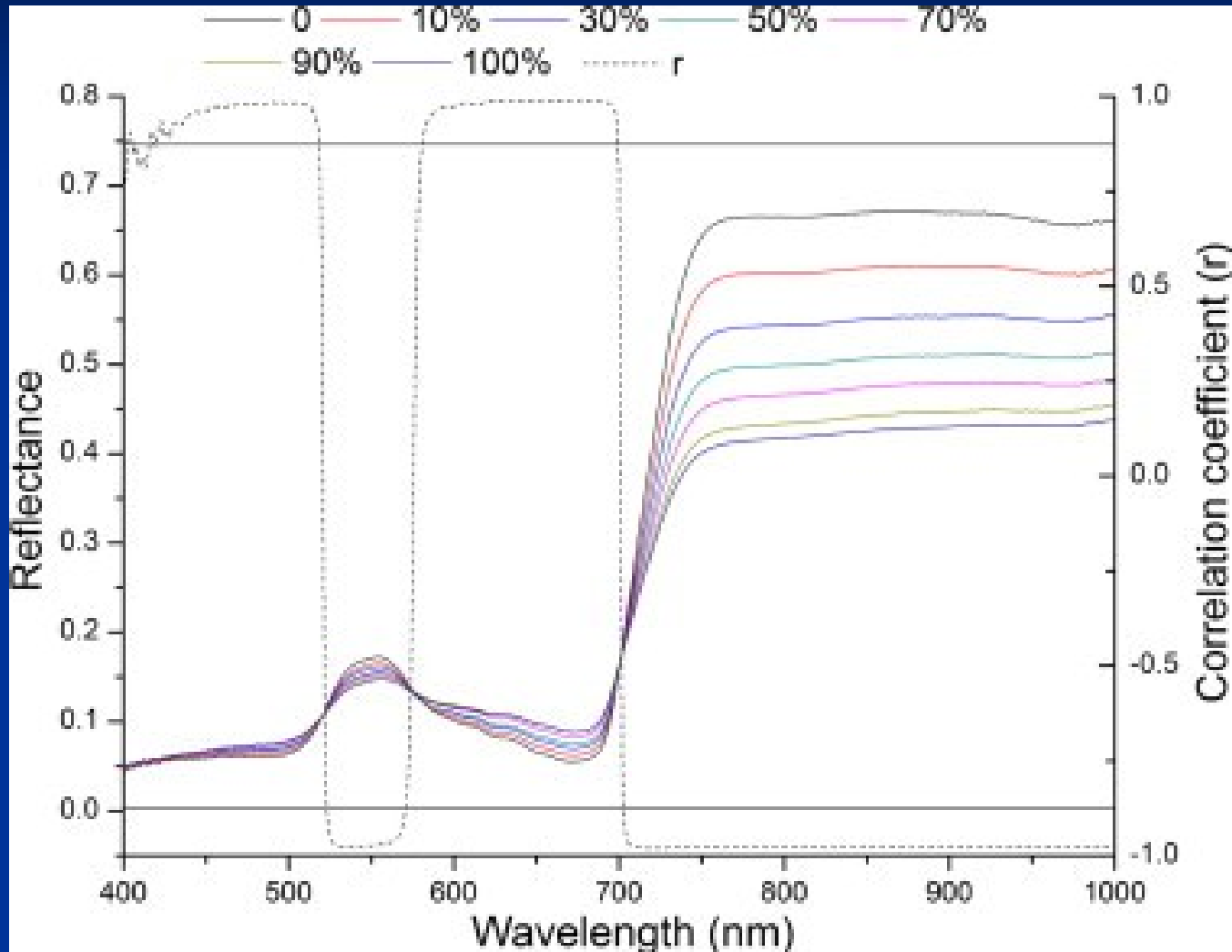
reflected

transmitted

Spectral Reflectance



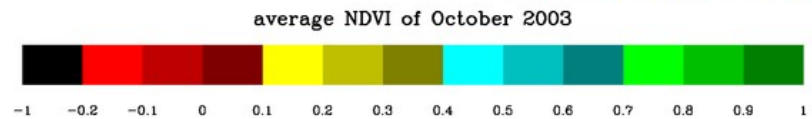
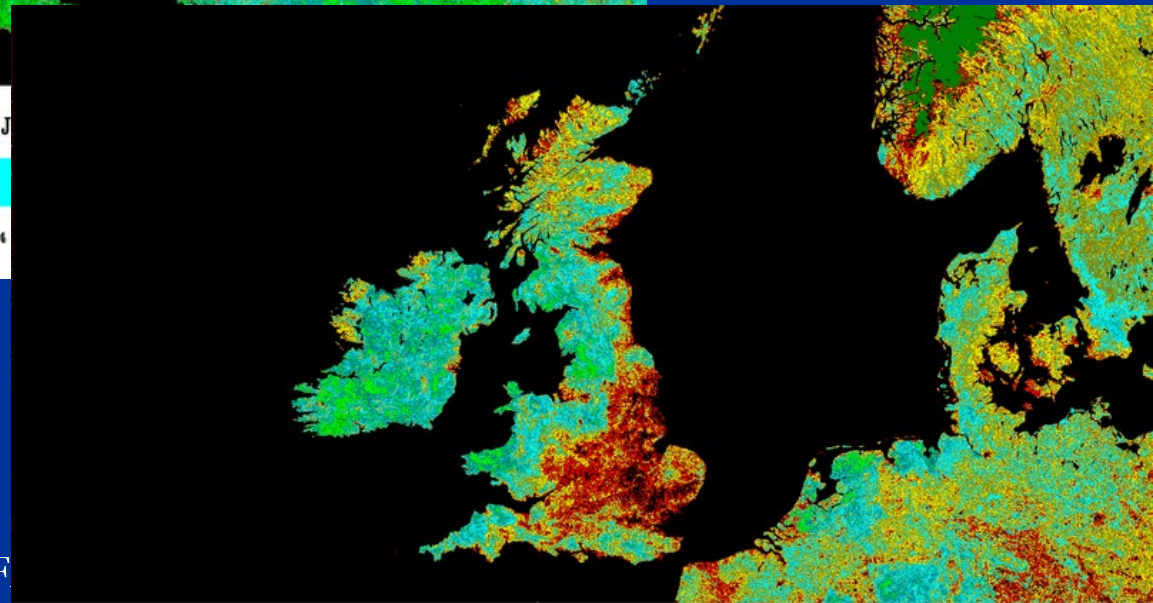
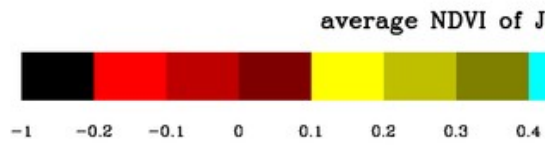
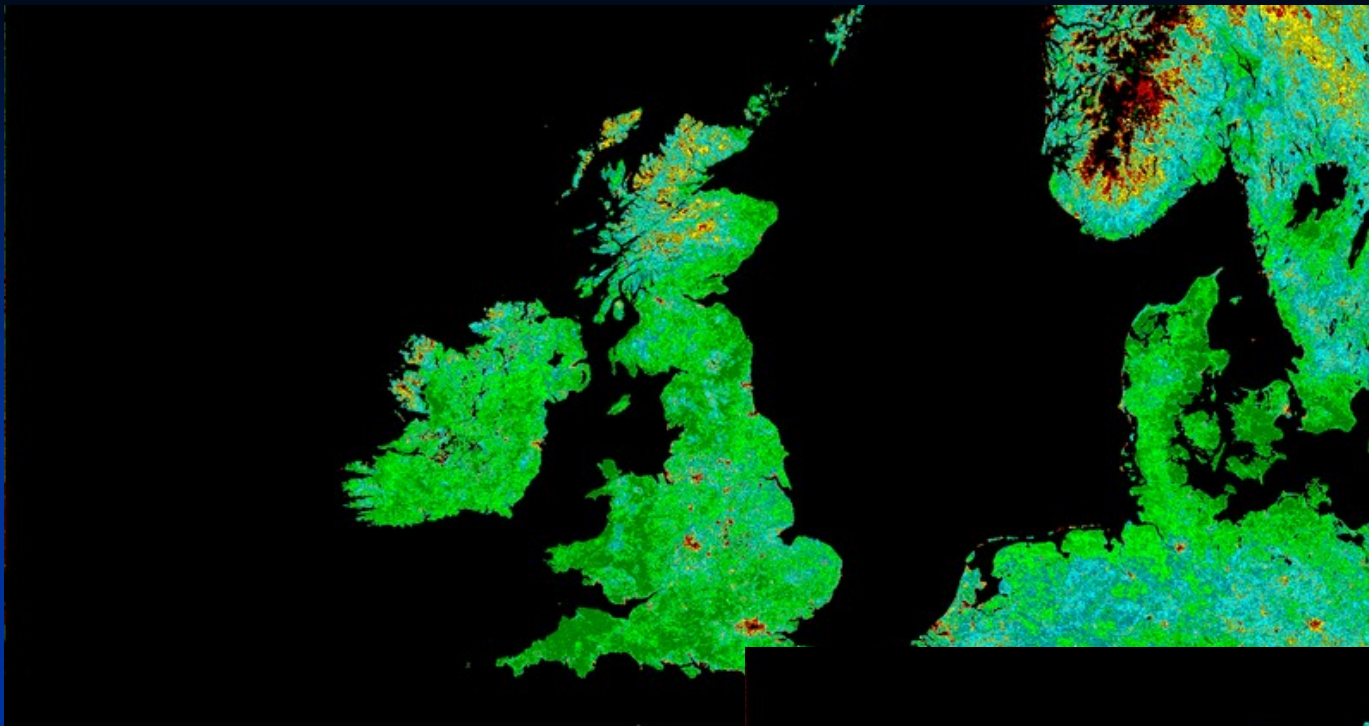
Leaf spectral reflectance



NDVI

- The **Normalized Difference Vegetation Index (NDVI)** is a simple graphical indicator that can be used to analyze remote sensing measurements, typically but not necessarily from a space platform, and assess whether the target being observed contains live green vegetation or not.

- Source: <http://web.pdx.edu/~emch/rs/vh3.html>



■ <http://en.wikipedia.org/wiki/F>

NDVI

- The NDVI is calculated from these individual measurements as follows:



$$(R740 - R660) / (R740 + R660)$$

PRI

Photosynthetic reflectance index

$$PRI = (R_{570} - R_{531}) / (R_{570} + R_{531})$$

$$PRI = (R_{531} - R_{570}) / (R_{531} + R_{570})$$

Vegetation indices

- **Poměrové indexy**

- Poměrové indexy dávají do vztahu jednoduchým nebo normalizovaným poměrem odrazivost povrchů v červené viditelné a blízké infračervené části spektra. Mezi nejčastěji používané poměrové indexy patří například: Jednoduchý poměrový vegetační index (RVI - Ratio Vegetation Index):

-
-

$$RVI = \frac{NIR}{RED}$$

$$(R740 - R660) / (R740 + R660)$$

- Normalizovaný diferenční vegetační index (NDVI - Normalized Difference Vegetation Index):

-
-

$$NDVI = \frac{NIR - RED}{NIR + RED}$$

- Transformovaný vegetační index (TVI - Transformed Vegetation Index):

-

$$TVI = SQRT\left(\frac{NIR - RED}{NIR + RED} + 0.5\right)$$

Reflectance of Spartina Leaves

