The RAMI on-line model checker (ROMC): a tool for the automated evaluation of canopy reflectance models.

J.-L. Widlowski, M. Robustelli, M. Taberner, B. Pinty and all RAMI participants

Joint Research Center of the European Commission, Via E. Fermi, 1, 21020-Ispra (VA), Italy, (Jean-Luc.widlowski@jrc.it)

The Radiative transfer Model Intercomparison (RAMI) exercise was first launched in 1999, and then again in 2002 and 2005. RAMI aims at evaluating the performance of canopy reflectance models in absence of any absolute reference truth. It does so by intercomparing models over a large ensemble of test cases under a variety of spectral and illumination conditions. A series of criteria can be applied to select an ensemble of mutually agreeing 3-D Monte Carlo models to provide a surrogate truth against which all other models can then be compared. We will present an overview of the RAMI activities and show how the results of the latest phase have lead to the development of the RAMI Online model checker (ROMC). This tool allows both model developers and users to evaluate the performance of their canopy reflectance models a) against previous RAMI test cases (whose results have already been published in the literature), and b) against test cases that are similar to the RAMI cases, but for which no results will be known a priori. As such the ROMC allows models to be "debugged" and/or "validated" autonomously on a limited number of test cases. RAMI-certified graphics that document a model's performance can be downloaded for future use in scientific presentations and/or publications.