



Remote Sensing

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## Remote Sensing of Evapotranspiration (ET)

**Edited by: Prasanna Gowda and Pradeep Wagle**

Evapotranspiration (ET) is a critical component of the water and energy balances, and the number of remote sensing-based ET products and estimation methods has increased in recent years. Various aspects of remote sensing of ET are reported in the 11 papers published in this book. The major research areas covered by this book include inter-comparison and performance evaluation of widely used one- and two-source energy balance models, a new dual-source model (Soil Plant Atmosphere and Remote Sensing Evapotranspiration, SPARSE), and a process-based model (ETMonitor); assessment of multi-source (e.g., remote sensing, reanalysis, and land surface model) ET products; development or improvement of data fusion frameworks to predict continuous daily ET at a high spatial resolution (field-scale or 30 m) by fusing the advanced spaceborne thermal emission reflectance radiometer (ASTER), the moderate resolution imaging spectroradiometer (MODIS), and Landsat data; and investigating uncertainties in ET estimates using an ET ensemble composed of several land surface models and diagnostic datasets. The effects of the differences between ET products on water resources and ecosystem management were also investigated. More accurate ET estimates and improved understanding of remotely sensed ET products are crucial for maximizing crop productivity while minimizing water losses and management costs.

