BayCEER Kolloquium

Lectures in Ecology and Environmental Research

WS 2017/18

UNIVERSITÄT BAYREUTH

Thursday
30.11.2017
12:00 in H6, GEO

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Improving land models through the use of surface temperature evaluations

When studying the earth's surface, we largely rely on surface observations, remote sensing, and modeling, which form a three-legged stool. Each of these methods can only provide a partial confirmation of reality and requires the support of the other two. As part of this triad, land models are a necessary tool for understanding the earth system, yet models are largely unconstrained: process representations vary between models and parameter values are unknown. As a result, when land models are intercompared, there is large divergence in simulated values, eroding the value of one of the crucial tools for understanding the earth's surface.

We demonstrate how observed surface temperature can inform model evaluation and development. Surface temperature is the diagnostic variable of the modeled surface energy balance and is an ideal supplement to typical model evaluations, which lack information on the surface energy balance. This study focuses on modeling seasonal snow packs, but many of the lessons learned are transferable to land modeling in general.

The lectures are an inter-disciplinary platform for students, junior and senior scientists. Abstracts and further information: www.bayceer.uni-bayreuth.de/kolloquium/