

Wintersemester 2009/2010

Gebäude GEO I
Hörsaal H8

BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung

Montag 07.12.2009, 16:15 Uhr, H8

Anschließend Postkolloquium mit Bier und Brezeln im Foyer H8

Prof. Dr. Yaoming Ma

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Recent progress on the study of land- atmospheric interaction over the Tibetan Plateau area

As a unique geological and geographical unit, the Tibetan Plateau dramatically impacts the world's environment and especially controls climatic and environmental changes in China, Asia and even in the Northern Hemisphere. With support from various agencies in the People's Republic of China, a Tibetan Observation and Research Platform (TORP) is now implementing. The background of the TORP, and the monitoring plan of long-term scale (5-10 years) will be introduced. Then the preliminary results, such as the characteristics of land surface heat fluxes and CO₂ flux partitioning, the characteristics of atmospheric and soil variables, the structure of the Atmospheric Boundary Layer will be shown. The study on the regional distribution of land surface heat fluxes is of paramount importance over heterogeneous landscape of the Tibetan Plateau. Therefore, the parameterization methods based on satellite data and ground-observations have been tested for deriving surface reflectance, surface temperature, NDVI, MSAVI, vegetation coverage, LAI, net radiation flux, soil heat flux, sensible and latent heat flux over heterogeneous landscapes. As a case study, the methods were applied to the experimental area of the CAMP/Tibet (CEOP - Coordinated Enhanced Observing Period) and the Asia-Australia Monsoon Project (CAMP) on the Tibetan Plateau. Scenes of Landsat-7 ETM, NOAA/AVHRR, ASTER and MODIS were used. To validate the proposed methods, the ground-measured values are compared to satellite derived values.

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