

## **Applicable algorithm to map daily evapotranspiration using MODIS images for the Laohahe River basin, northeastern China**

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**Abstract** An algorithm for mapping daily spatial actual evapotranspiration (ET) from remotely sensed MODIS data is presented. It is based on the surface energy balance scheme and the modified Priestley-Taylor equation, and has been applied to the MODIS data acquired during growing seasons over the Laohahe River basin, northeastern China. Regional daily ET values computed by the modified Xinanjiang hydrological model were used to validate ET values derived from MODIS data. The results were in good agreement, with a root mean square error of 0.3843 mm and correlation coefficient of 0.9029. It is suggested that the algorithm is applicable and operational for mapping daily actual ET over the study area.

**Key words** daily actual evapotranspiration; MODIS; Priestley-Taylor equation; Laohahe River basin, China