

Analysis of Radiance Fluxes of different Land Cover in Poyang Lake Wetland.LIANG Wenguang¹, ZHAO Yingshi¹ and ZHOU Xia^{1,2}¹ College of Resources and Environment, Graduate University of Chinese Academy of Sciences, Beijing 100049, China;² Institute of Geography in Guang Zhou, Guang Zhou 510070, China

To analyze changes of the radiance fluxes of different land surfaces, two field experiments were carried out on October, 2005 and April, 2006 in Poyang Lake wetland. The study areas include grass and sand. Some weather data (including temperature, wind speed, sun radiance flux, and net radiance flux, etc), infrared radiance temperature and plant structure parameters have been collected. The radiance fluxes including sensible heat flux, soil heat flux and latent heat flux were calculated for analyzing the change features of different land surfaces (grass and sand) and different period (spring and autumn) in wetland. The result shows that, for grass land, the latent heat flux dominates in the consumption of its net radiance flux, and the ratio can be 84% at the highest. The ratio has the descending tendency with the sun radiance flux's reduction. For sand land, the majority of net radiance flux is consumed by the sensible flux, and the ratio can reach 62%. The radiance fluxes in spring are higher than that in autumn. In addition, the analysis on correlation between latent heat flux and some factors (especially the weather factors) shows that, the latent heat flux in wetland has close relationship with the temperature and the sun radiance flux, and the coefficients are larger than 0.7. It may be explained that most land surfaces are saturated in wetland, when the latent heat flux is less restricted by the conditions of land surfaces, and the latent heat flux may mainly depends on weather condition such as temperature or sun radiance.

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