

Spatial scales relevant to the heat and scalar transports over Siberian Taiga forest revealed with the aircraft observation

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ABSTRACT

Aircraft observations of the turbulence heat and scalar fluxes as well as the surface radiative temperature was conducted during GAME-Siberia Yaktsuku IOP in the early summer of 2000, in order to identify 1) the regionally averaged surface flux of the sensible and latent heat and carbon dioxide over the Siberian taiga forest, 2) the distribution of these fluxes in correspondence with that of the surface features, and 3) the difference in the boundary layer development over the different surface features. This paper focuses on the characteristics of the surface temperature and the air temperature in the surface layer in terms of their spatial distribution and its change with the seasonal march from the late April to the early June. In order to assess the largest length scale embeded in the spatial scale of the surface temperature as well as the air temperature, their integral scale was calculated. Characteristic feature shown in the computed integral scale as well as the relation between the integral scale of the surface temperature and the air temperature will be discussed in the presenation.

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