

Abstract

Eddy correlation techniques were used to monitor the vertical transfer of evaporation and sensible heat. The measurements of these eddy fluxes have been made over a thick short grass surface at the meteorological station, University of Malaya. The observations were taken at the height of about 2.6 m where the latent heat flux (LE) was measured using a Krypton Hygrometer while the sensible heat (H) was measured with the Sonic Anemometer and fine wire thermocouple. Net radiation, R_n was measured with net radiometer and ground heat flux, G was estimated from temperature balance equation. The data were recorded at every 5 seconds during days without rain and days with rain for 24 hours cycle (Malaysia standard time) for several days. The latent heat flux from the eddy correlation technique was compared with the evaporative flux from the surface energy balance equation. The results showed that the daytime hourly values from the energy balance equation exceeded the values from the eddy correlation technique. Generally, it was found that both methods still showed good agreement. The observation also showed that cloud cover reduced the evaporative flux, when compared to cloudless period. It was also found that the eddy correlation technique was not very efficient during days with rain.