



## Abstract Details

[AOGS 1st Annual Meeting](#) > [Ocean and Atmospheres](#) > **Seasonal variations of diurnal cycles of local circulation and cloud activity observed at Serpong, West Jawa, Indonesia >**

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**Title:** Seasonal variations of diurnal cycles of local circulation and cloud activity observed at Serpong, West Jawa, Indonesia

**Abstract:** Seasonal variations of diurnal cycle of wind, cloud activity and precipitation at Serpong, West Jawa, Indonesia (6.4 S, 106.7 E, 50 m above sea level) were investigated with data of a UHF-band wind profiler (BLR) from 1993 to 2002, except for 2000, the GMS IR1 data and rainfall amount data observed with the rain gauge at the BLR site during 1-30 November 1994 and 1-31 January 1995. The diurnal variation component of wind was obtained by subtracting a background wind (defined by daily mean value at each height) from the original data. Because of the geographical feature around Serpong, the vertical structure of meridional wind showed a feature like the sea-land breeze circulation in dry season (April-November). The feature of diurnal variation of meridional wind changed from November (end of dry season) to January (rainy season). The reversal of meridional wind in the vertical direction in daytime became unclear in January. The time of changing from land breeze to sea breeze was midnight and the time of enhancement of sea breeze at low level was earlier in rainy season than in dry season. Clouds developed over Jawa Island and rainfall frequently occurred at Serpong during 13-17 LST, which seemed to enhance sea breeze in November 1994. In January 1995, developed clouds were observed not only over Jawa Island during 12-15 LST but also over the Jawa Sea near the northern coastline of the west part of Jawa Island in midnight. The time of changing from land breeze to sea breeze at low level in midnight was almost coincident with that of the decay of clouds over the Jawa Sea. Developed clouds over the Jawa Sea in midnight were not observed in November. Rainfall frequently occurred from evening to midnight in January. Diurnal variations of meridional winds in November 1994 and January 1995 were similar to climatology, respectively. We consider that the differences of diurnal variations of meridional winds between dry and rainy seasons were associated with those of diurnal variations of cloud activities.

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