



The study on estimate historic foggy days using meteorological data at Tatachia region in central Taiwan

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The purpose of this study was to understand dew point temperature and solar radiation value during foggy time based on an additional visible sensor at Lintsushan Observatory, Tatachia region, central Taiwan. The analysis showed that the deficit of air temperature and dew point temperature (DADP) were lower than 1 [U+2103] during foggy time. The correlative regression between measured value and estimated value was $y = 0.8547x + 0.8872$. The correlative coefficient was 0.8341. The historical annual foggy days from 1997 to 2008 of Guanshan Observatory (latitude: 23°30'52.74", longitude: 120°54'42.72", altitude: 1,700 m) and Lintsushan Observatory (latitude: 23°28'38.68", longitude: 120°53'18.47", altitude: 2,780 m) were estimated using Magnus Model Method. The result showed that annual foggy days decreased gradually at Guanshan Observatory located on middle altitude. The annual foggy days increased gradually at Lintsushan Observatory located on higher altitude.