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2003년 여름철 서울의 도시열섬

Urban Heat Islands in Seoul during the Summertime of 2003

김연희 · 엄향희 · 오성남 · 김상백
기상청 기상연구소 응용기상연구실

Urban heat islands related with Cheongyecheon restoration in Seoul metropolitan area for the summertime of 2003. To investigate the spatial and temporal structure of the urban heat island in Seoul, temperature data measured at 32 automatic weather stations (AWSs) in the Seoul metropolitan area and 12 additional stations operated by the portable device for the measurement of temperature and relative humidity in the Cheonggyecheon area. A relative warm region extends in the east-west direction and warm cores are pronounced in industrial and commercial area with high story buildings and heavy traffics. A relative cold region is observed in mountain area and near the borderline of Seoul except near the southwestern and southeastern borderlines where the sprawling expansion of urbanization has been already progressed. The urban heat island is closely linked to that of land-use type, weather and human activities related with anthropogenic heat release, and topography. Similar to previous studies for Seoul and other cities, the intensity of urban heat island is stronger in the nighttime than in the daytime, decreases with increasing wind speed, and is pronounced for clear skies (e.g. Oke, 1987; Kim and Baik, 2003).

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