

Characteristics of Ozone Concentration in the Rural Area of Korea

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Continuous measurements of ground-level ozone (O_3) were made and analyzed in ten minutes intervals in the rural area of Korea from July 1993 to June 1994. This site is located in Chongwon near latitude 35° N, longitude 127° E. The results show that the annual mean value was 17 ppb, and monthly mean ranged from 6 to 47 ppb. A pronounced maximum in summer and a minimum in winter were found and these are related to anthropogenic emission and photochemical reaction. Diurnal variations showed a normal distribution with a maximum at 14:00 - 15:00 and a minimum at 07:00 - 08:00. During the period when ozone concentration was very high, the stable winds were from N and NW, on the other hand, when ozone concentration was very low, air movement in the large scale was from the North Pacific Ocean. This suggests that in the rural area the long range transport of anthropogenic pollutants from distant sources made the larger contribution than the generation of ozone from local sources in the rural area.