

## CHARACTERISTICS OF CO<sub>2</sub> CONCENTRATION IN THE BACKGROUND AREA OF THE KOREAN PENINSULA

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The greenhouse gas is one of the major parameters of climate change, which makes a role of positive radiative forcing. Korea Meteorological Research Institute (METRI) has started systematic monitoring on the greenhouse gases at the Korea Global Atmospheric Watch Observatory (KGAWO) in Anmyeondo, which is a regional station measuring the background concentration in East-Asian region. CO<sub>2</sub> is a significant greenhouse gas that is the largest contributor to global warming. In this study, the fluctuation tendency of CO<sub>2</sub> is analyzed by NDIR (Non-Dispersive InfraRed analyzer) during the period from January 1999 to December 2002 at the KGAWO. The measured CO<sub>2</sub> concentration data is validated by the method of World Data Center for Greenhouse Gases (WDCGG), and compared with the flask sampling data operated by NOAA/CMDL. The variations of the CO<sub>2</sub> concentration are investigated with wind direction and other meteorological parameters. The relationships between each greenhouse gas and trace gases are also analyzed to explain the effect on the background concentration by statistical method. The results of this study are expected to be essential information for the prediction of climate change in Korean peninsula.