

Correlation of CO and CO₂: Diagnostics for emission source characteristics

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The linear regression slope of CO-CO₂ correlation (dCO/dCO₂ ratio) can be used to investigate the characteristics of combustion emission sources (e.g., fossil fuel and biomass burning). While dCO/dCO₂ ratios have widely been used in biomass burning studies, there have been few studies systematically discussing the dCO/dCO₂ ratios from other combustion sources. We have conducted simultaneous measurements of CO and CO₂ in various locations, including urban areas (Tokyo, Nagoya), Asian outflow, and biomass burning (Indonesia, northern Australia). Here we compile and summarize the CO-CO₂ data from our measurements and other previous measurements. The characteristics of emission sources and comparison with emission inventory will be discussed.