

AHW027-20

会場:202

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飛騨高山冷温帯落葉広葉樹林サイトにおける大気中CO₂濃度及び安定同位体比の長期観測

Long-term measurements of atmospheric CO₂ concentration and its isotopes at a cool-temperate deciduous forest in Japan

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For a better understanding of the global carbon cycle, worldwide systematic measurements of CO₂ concentration are being made. Its carbon and oxygen isotopic measurements that give us useful information about the relative contributions of the terrestrial biosphere and the ocean in the carbon cycle and those of the photosynthetic and respiratory CO₂ components in the biospheric flux, have also been made at some stations. However, systematic measurements at sites influenced strongly by terrestrial biospheric activities are still insufficient, especially in the monsoon Asian region. Therefore, we have been measuring atmospheric CO₂ and its isotopic ratios at the Takayama site in a cool-temperate deciduous forest in central Japan since 1993 and 1994, respectively, together with the oxygen isotopic ratio in precipitation since 2002. In this paper, we will present secular trends and year-to-year variations of the concentration and the isotopic ratios obtained from the long-term measurements at the site, and discuss factors governing these variations.

キーワード: 長期観測, 二酸化炭素, 安定同位体, 森林生態系, 炭素循環

Keywords: long-term measurement, CO₂, stable isotope, forest ecosystem, carbon cycle