

## Reconstruction of summer insolation in the Yakushima island using stable carbon isotope in Yakusugi Cedar

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One of the most important climate feedback mechanisms is cloud cover effect. However, it is difficult to estimate the variability of the past cloud condition.

Tree ring  $\delta^{13}\text{C}$  reflects the balance between stomatal conductance to incoming  $\text{CO}_2$  and photosynthetic rate. In the case of moist area, dominant control of  $\delta^{13}\text{C}$  in tree ring is photosynthetic rate. The meteorological observations in the Yakushima island were conducted. As a result, Ishiduka region which is 900 m above sea level was extremely large amount of precipitation. Relative humidity was found to be almost 100% and to be very small changes. In this presentation, we will show the results of annual tree ring  $\delta^{13}\text{C}$  over the past millennium.

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