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ACG034-P01

Room:Convention Hall

Time:May 27 14:00-16:30

A Fundamental Study on paleoclimate reconstruction using tree-ring of Teak

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In this study, in order to assess the reliability of various parameters in tree-rings as climate proxies, we performed a systematic comparison between temporal variation of meteorological data (precipitation, relative humidity and hours of sunlight) and those of four parameters (ring width, mean vessel area of earlywood, $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) in tree-rings collected from Java Island, Indonesia.

The analyzed Teak sample was collected from a site in Indramayu, West Java, Indonesia. Precipitation records from Indramayu show a large seasonal cycle, which oscillated between a dry season (around May to October) and a wet season (around November to April). Seasonal cycle forms annual growth rings in Teak. The sample was cut down in December of 2003 and was observed 30 of tree-ring, showing that its growth spanned the interval from 1974 to 2003. We investigated the correlations between four parameters of tree-rings and climate parameters during 1974-2004.

In this presentation, we will present the results of relationship between tree-rings parameters and meteorological data. We will also present the results of FT-IR spectrum, $\delta^{13}\text{C}$ and $\delta^{18}\text{O}$ measurements, in order to confirm purified cellulose from tree-rings.