

Mercury concentrations in tree rings observed at Yakushima island

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In order to clarify the mercury pollution history, we measured mercury concentrations in tree rings at Yakushima island. Air pollution from East Asia continent may directly influence the atmospheric environment of mountain regions and islands. Especially, Yakushima island is located on East Asia continent, also there are not emission sources exist between Yakushima island and East Asia continent. The average mercury average concentrations in tree rings obtained from Yodo experimental site (1370 m a.s.l.,) in 2012 was $1.96\text{ng}\cdot\text{g}^{-1}$ ($n=32$). Two peaks are observed in tree rings. These peaks were observed during 1910-1950 and 2000-2012 and these concentrations are 2.24 ± 0.21 , and 2.18 ± 2.35 , respectively. The peak of 1910-1950 may cause by the regional pollution originated from the biomass burning due to the forestry activity in Yakushima Island. On the other hand, the 2000-2012 peak may cause by Long-range transport of air pollution from East Asia continent.