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沖縄本島南部における降水同位体比の変動要因
What controls stable isotopes in precipitation in Okinawa Island

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Stable isotopes in precipitation are fundamental factors in controlling the oxygen and hydrogen isotope ratios of environmental proxies on land, and provide important clues for interpreting the isotope records in natural archives (such as speleothems and tree rings). However, isotopes in precipitation in mid and low latitudes lands are controlled by many factors. Therefore, present-day observation and understanding of the physical mechanisms are needed for quantitative reconstruction of past climate change. Here, we show the stable isotope ratio of precipitation in Okinawa Island, Japan. Precipitation samples were collected at the roof of the Okinawa prefectural institute of health and environment (26 11'11N, 127 45'13E). We measured the hydrogen and oxygen stable isotope ratios of the past 2-year samples. The monthly averaged isotope ratio negatively correlates with relative-humidity and air-temperature. Precipitation amount, which often controls precipitation isotopes in continental region, shows weak correlation. The results imply significant isotope enrichment due to rain re-evaporation in the atmosphere.

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