

## Oxygen isotopic records of the stalagmite KA01 from Kiriana in Mie Prefecture, Japan

MORI, Taiki<sup>1\*</sup> ; KANO, Akihiro<sup>1</sup> ; SONE, Tomomi<sup>2</sup> ; SHEN, Chuan-chou<sup>3</sup> ; KASHIWAGI, Kenji<sup>4</sup>

<sup>1</sup>Kyushu University, <sup>2</sup>Marine works Japan, <sup>3</sup>National Taiwan University, <sup>4</sup>Toyama University

It has been considered that the stalagmite oxygen isotope is reflected from rainfall intensity of the water reserve area. Especially, the records from south China have been treated as proxy of the intensity of the East Asian Summer Monsoon (EASM). However, some recent studies suggested that the Chinese stalagmite records rather indicate the change in proportion of the Indian Monsoon from southwest and the Asian Monsoon from southeast. In Japanese Islands located at the east margin of the Asian Monsoon area, the rainfall during summer is almost exclusively brought from EASM. Thus, the EASM intensity was more directly recorded in the Japanese stalagmites than in the Chinese stalagmites.

We studied the stalagmite KA01, a 35-cm-long specimen that has been formed from 12.6 ka to 1.3 ka. KA01 and some Chinese records share similar features, such as higher values around 12 ka, depressed intensity during 7-9 ka, and the trend change from increasing to decreasing at 2.8 ka. However, KA01 exhibits smaller amplitude of the isotopic change than the Chinese specimens. The reduced amplitude of KA01 was likely attributed to the shorter distance of the vapor transportation, which reflected on the condensation ratio. Thus, our isotopic profile of KA01 is probably more faithful record of the EASM and therefore can be valuable for considering the Holocene evolution of the East Asian climate system.