Heinrich events and last glacial recorded in a stalagmite from Mie Prefecture, Japan

*Taiki Mori[1], Akihiro Kano[1], Hu Hsun-Ming[2], Shen Chuan-Chou[2], Kenji Kashiwagi[3]

1.Kyushu Univ., 2.National Taiwan Univ., 3.Toyama Univ.

Stalagmites record physicochemical conditions in isotope and elemental composition in their carbonate fraction. Here, we investigate 10-cm-long stalagmite KA03 collected from Kiriana cave in Mie Prefecture. This stalagmite has high concentration of uranium and provides accurate U-Th ages. Results of dating show that the stalagmite has been growing during the last 80 kyr almost continuously. The oxygen isotopic curve of KA03 generally follows the records from the Chinese caves and Greenland ice-sheets in terms of 1) drastic decrease at the B/A warming, and 2) high isotopic intervals corresponding to the Heinrich events. However, KA03 lacks the millennium changes of Dansgaard-Oeschger cycles, which have been reported in a stalagmite from Gifu Prefecture. A distinct feature of KA03 oxygen isotope is a linear increase from 37 ka to the Last Glacial Maximum (LGM). Assuming that the isotope is a proxy of humidity, the amount of rainfall had been decreasing from 37 ka to LGM. Because the locality is generally dry in winter season, the stalagmite KA03 is a significant record of the East Asian summer monsoon.

