

# **The hydroclimate variability in Malay Peninsula over the last 30 kyr revealed by stalagmite $\delta^{18}\text{O}$ records**

**HONG-WEI CHIANG<sup>1</sup>, ROS FATIHAH MUHAMMAD<sup>2</sup>,  
DUNG CHI NGUYEN<sup>3</sup> AND Y.-G. CHEN<sup>4</sup>**

<sup>1</sup>Academia Sinica

<sup>2</sup>University of Malaya

<sup>3</sup>Vietnam Academy of Science and Technology

<sup>4</sup>Research Center for Environmental Changes

Presenting Author: [hwchiang@ntu.edu.tw](mailto:hwchiang@ntu.edu.tw)

The tropical Indo-Pacific is climatically important, since the warmest water mass on earth is the “engine” for global atmosphere dynamics, and also home to billions of people. It is, therefore, critical to identify the natural variability in this region. But records from tropical areas are relatively sparse, particularly continuous ones. Here we present stable oxygen isotopes ( $\delta^{18}\text{O}$ ) in speleothems from Malay Peninsula to imply the hydroclimate variations spanning the past ~30 kyrs. The results are characterized by strong centennial to millennial oscillations, and regarded as a reliable tropical record. Through examining relationships among the regional  $\delta^{18}\text{O}$  values, we can understand the variation of the Intertropical Convergence Zone in the western Pacific over the last 30 kyrs, which can benefit modeling and projections on the future prediction.