GSA South-Central Section - 51st Annual Meeting - 2017

Paper No. 6-4
Presentation Time: 9:00 AM-5:30 PM

LATE QUATERNARY STALAGMITE PALEOCLIMATE RECORDS OF HELICTITE CAVE, VA

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Here we present high resolution records of paleoclimate conditions for east central North America based on the changes in $\delta^{18}O$, $\delta^{13}C$, and Sr preserved during the growth of a stalagmite collected from Helictite Cave, VA. The stalagmite, VAHEL-004, is 1137 mm long and has three hiatuses that separate the stalagmite into essentially four different climate records roughly spanning the time periods of 127.2 to 116.4 ka BP, 104.1 to 98.5 ka BP, 50.5 to 46.4 ka BP, and 720 yrs BP to present,

respectively. Changes in the $\delta^{18}O$ preserved in VAHEL-004 correlate well to paleoclimate records reported for stalagmites from West Virginia, suggesting that these stalagmites reliably recorded climate conditions experienced in the region. The four segments of VAHEL-004 grew rapidly over relatively short periods of time, resulting in very high resolution records of climate conditions. The lower section of VAHEL-004, which grew during the warmest portion of Marine Isotope Segment 5 (MIS5), is potentially the most interesting section of the speleothem. The geochemistry of this section may provide insight into the previous interglacial period which may provide insight to climate dynamics of the current interglacial period.
Session No. 6--Booth# 9

T2. Advances in the Application and Development of Terrestrial Paleoclimate Proxies (Posters)
Monday, 13 March 2017: 9:00 AM-5:30 PM
Grand Ballroom CDE (Omni Colonnade San Antonio)

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