

## ***Interactive comment on “A Stalagmite Test of North Atlantic SST and Iberian Hydroclimate Linkages over the Last Two Glacial Cycles” by Rhawn F. Denniston et al.***

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Denniston et al provide a new and long  $\delta^{13}\text{C}$  and  $\text{d}234\text{u}$  reconstruction of hydroclimate from two caves in Portugal. The stalagmites are securely dated, but have many hiatuses which may be related to climatic variation. In general, warm conditions are associated with lower  $\delta^{13}\text{C}$  values, suggesting enhanced soil productivity and or decreased prior calcite precipitation, among several hypotheses for the controls on  $\delta^{13}\text{C}$ . Where available, the  $\text{d}234\text{U}$  values show similar variations to the  $\delta^{13}\text{C}$ , suggesting the record is one of effective moisture. I find the paper to be clearly written and well-documented, with a copious degree of reconciliation with the literature that attempts

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to integrate multiple lines of evidence for hydroclimatic change over Iberia. The presentation does not require improvements in general. However, I wonder if this paper would have more of an impact if it were 2/3rds the length and focused primarily on the record at hand, and its  $\delta^{13}\text{C}$  correlation to the marine SST records? The level of detail is appreciated but may detract from what is by all other accounts is a great record.

We thank the reviewer for these comments. Given the comments by reviewers 1,2, and 4, however, we have opted to expand the manuscript in order to better develop the data and interpretations.

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