

Earth Syst. Sci. Data Discuss., referee comment RC3
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Reply on CC2

John Wehmiller (Referee)

Referee comment on "MIS 5e sea-level history along the Pacific coast of North America"
by Daniel R. Muhs, Earth Syst. Sci. Data Discuss.,
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Related to this discussion, it should be pointed out that the AAR community initiated an effort in 2010 to establish a program for archival data storage. The results of this effort can be found at the US NOAA NEIC Paleoclimatology site (link below). Datafiles on the site may not have some specific information that would be sought by WALIS users but the overall structure and content of the site should be of interest to the WALIS community. Ideally, links between the NOAA site or other databases could be established so that WALIS community is aware of these other sources of information. Several publications and datasets discussed in the Muhs WALIS paper are listed in the NOAA site, and others remain to be added.

In the 50+-year history of the AAR method, as with many other methods, technological advances have affected the type and quality of data. In the early years, only one amino acid D/L value could be measured; newer methods allowed multiple D/L measurements with varying degrees of confidence. Data digitization and more rapid and more sensitive analytical procedures further enhanced the method. Comparing D/L values obtained in the past two decades to those from the 1960's and 1970's must be done with extreme care, as inter-lab (and even intra-lab) differences can be significant.

For those studies that report D/L values for multiple amino acids, it is important to note that, in almost all cases, the investigator(s) emphasized results for certain amino acids. The reasons for relying on specific amino acid results are usually discussed in the primary literature. It is important that the WALIS database include this information if it is to be consistent with the original work.

NOAA Paleoclimatology Data site

<https://www.ncei.noaa.gov/products/paleoclimatology>

Search for "Paleodata", then enter "Racemization"