New constraints on the Eastern Mediterranean δ18O:δD relationship

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Previous work on oxygen and hydrogen isotope data from Eastern Mediterranean water samples has defined a mixing relationship in this region that is different from the world surface ocean. This prompted speculations about the hydrological processes in the Mediterranean region. We present new δ18O and δD data from the Eastern Mediterranean region and the East Greenland Current system, spanning a wide salinity range. These data define δ18O:δD relationships for both regions that are consistent with the world surface ocean δ18O:δD relationship, despite the highly evaporative conditions that prevail in the Mediterranean region. These new geochemical data have suggested that the world surface ocean δ18O:δD relationship holds throughout almost the entire global salinity range.
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