



Paired $\delta^{13}\text{C}$ and $\% \text{CaCO}_3$ Records of ETM2 from the Pacific and Indian Ocean basins

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The hyperthermal events that punctuate the long-term warming of the early Paleogene are possibly the best examples in the geologic record of the climate system response to greenhouse warming on a timescale approaching the ongoing anthropogenic experiment. These events are primarily expressed as large negative carbon isotopic excursions (CIE) and widespread dissolution of deep-sea carbonates. Although these hyperthermal events have been recovered at many sites, primarily only the largest, the Paleocene Eocene Thermal Maximum (PETM); ~ 55.5 Ma, has been extensively investigated, yielding important insight into the dynamics of earth systems' responses to rapid carbon input and abrupt warming. In particular, acidification of the deep sea may have triggered the extinction of calcifying benthic foraminifera. However, the acidification also dissolved carbonate sediments; thus the onset of the PETM is truncated or highly condensed in marine records constructed to date. The development of high-resolution records of similar events is crucial to understanding the complete evolution and dynamics of hyperthermal perturbations to Earth systems and to constrain Eocene climate sensitivity. The Eocene Thermal Maximum 2 (ETM2 or H1; 53.7 Ma) appears to be such an event, a CIE associated with approximately half the warming and less severe dissolution than the PETM. Here we present paired $\delta^{13}\text{C}$ and $\% \text{CaCO}_3$ records of the ETM-2 from a several ODP Sites from the Pacific (865, 1209, 1210 & 1211) and Indian (752, 757, 1138) Ocean Basins. These records contribute to the ongoing development of globally distributed high-resolution records of global warming events.