

## Early to Middle Eocene Transition of the Colombian Basin ODP 999

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The paleoceanography of the Colombian Basin Ocean Drilling Program Site 999, during the Early to Middle Eocene Transition (EMET) approximately 48 - 50 million years ago (Ma), is examined using planktonic and benthic foraminifera. A previously unknown oxygen isotope anomaly is associated with the EMET in Cuba and is expected to be present in the Colombian Basin. Conditions that may have caused this event include an influx of fresh water from the Arctic Ocean into the Atlantic Ocean (the *Azolla* event) or the uplift of the Beata Ridge causing a temporary ocean gateway closing. These two occurrences will both disrupt ocean circulation, but variations in sea level and temperature can lead to a more distinct cause of the anomaly. Paleoceanographic parameters will be calculated by oxygen isotope analysis for sea surface temperature and planktonic to benthic ratios to calculate relative sea level. Planktonic foraminifera are expected to be high in volume with deep water conditions however benthic foraminifera are present representing shelf material. The appearance of benthic foraminifera (*Milliodidae* and *Alabama*) is indicative of turbidites which are frequent in the Colombian basin. Variations in sea surface temperature and relative sea level. The correlation of sea surface temperatures and sea level changes during the Early to Middle Eocene Transition will give insights to why these changes happened. The findings will characterize occurrences of freshwater influx into the oceans or tectonic activity and how it may effect future climate changes.