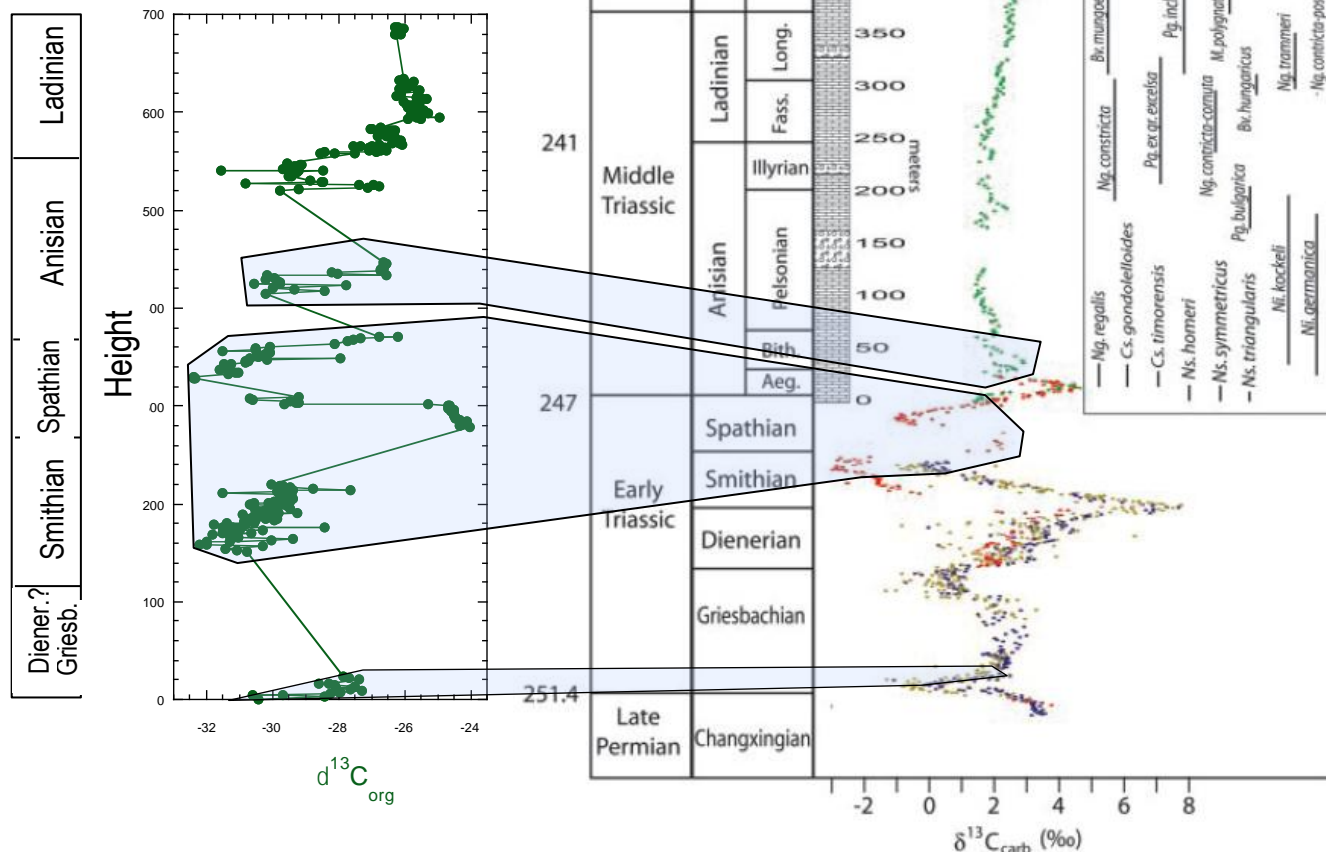


Constructing global $\delta^{13}\text{C}_{\text{carb}}$ and $\delta^{13}\text{C}_{\text{org}}$ reference curves for the Triassic

Miriam Katz (PI), David Mosher (graduate student), Samantha Langton (post-doc); Collaborators: D. Kent (Rutgers U.), G. Muttoni (U. of Milan), Atle Mørk (SINTEF Petroleum Research, & Norwegian U. of Sci. & Tech.), A. Milligan (Oregon State U.), Linda Godfrey (Rutgers U.), Manuel Rigo (U. degli Studi di Padova)

Comparison with $\delta^{13}\text{C}_{\text{carb}}$ records from Tethyan sections in China (Payne et al. 2004) reveals a global signal in our Svalis Dome (Barents Sea) $\delta^{13}\text{C}_{\text{org}}$ data in the Early to earliest Middle Triassic, showing promise for C-isotope stratigraphy.

Similarities in the Svalis Dome and China $\delta^{13}\text{C}$ records provide evidence of a global signal linked to sea level. During sea level rise, ^{12}C -enriched organic matter was sequestered on continental margins, driving the available C reservoir towards higher $\delta^{13}\text{C}$ values. During falling sea level, remobilized organic matter was reintroduced ^{12}C to the seawater.



In the second year of research on this project, we are completing isotopic studies on the inorganic bulk sediments. All samples have been crushed and await analysis at Rutgers University. Data analysis and results will be presented at a national meeting, and I anticipate that results will be submitted in 2 manuscripts for journal publication by the end of the year.