

B41H-2479 - Chaotic Late Triassic Carbon And The Overlooked Extinction At The Norian-Rhaetian Boundary

Thursday, 12 December 2019

08:00 - 12:20

- *Moscone South - Poster Hall*

Swirl Topics

- Earth Processes - SWIRL

Abstract

The latest Triassic was an interval of prolonged biotic extinction culminated by the end-Triassic Extinction, which is associated with a pronounced perturbation of the global carbon cycle that can be connected to extensive volcanism of the Central Atlantic Magmatic Province (CAMP). Earlier chaotic perturbations of the global carbon cycle can also be tied to the onset of declining latest Triassic diversity, which reached its maximum across the Norian-Rhaetian boundary (NRB). These perturbations are global across the Panthalassa Ocean to both sides of the Pangean supercontinent in both the Northern and Southern Hemispheres. The NRB witnessed the severe global extinctions of significant marine fossil groups, such as ammonoids, bivalves, conodonts and radiolarians. The onset of the stepwise Late Triassic extinctions coincided with the NRB carbon perturbation ($\delta_{13}C_{org}$), indicating that the combined climate and environmental changes impacted the global biota. The trigger of this event is attributed to a volcanic event pre-dating the NRB, an alternative source of volcanogenic gas emissions, and/or a meteorite impact.

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