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CARBON AT THE PERMIAN-TRIASSIC BOUNDARY

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Wolbach et al. (1985, 1989) discovered an increased abundance of elemental carbon with the soot morphology across the Cretaceous-Tertiary (K-T) boundary. This evidence suggested major wildfires and was consistent with the theory that a giant meteorite impacted with Earth 65 million years ago, causing a world-wide mass extinction event and triggering wildfires at the end of the Cretaceous. Although the K-T boundary has been studied extensively to explain the extinction of the dinosaurs and other species alive at that time, the largest mass extinction event occurred at the Permian-Triassic (P-Tr) boundary 245 million years ago. The procedures developed by Wolbach et al. have been used to isolate elemental and organic carbon in thirty-six samples from the Carnic Alps in Austria, across the P-Tr boundary. Determination of the abundance of both carbon types and their isotopic analysis could provide evidence indicating a possible cause for this mass extinction event and/or environmental changes occurring at this time.