# Synchrony of the Central Atlantic magmatic province and the Triassic-Jurassic boundary climatic and biotic crisis.



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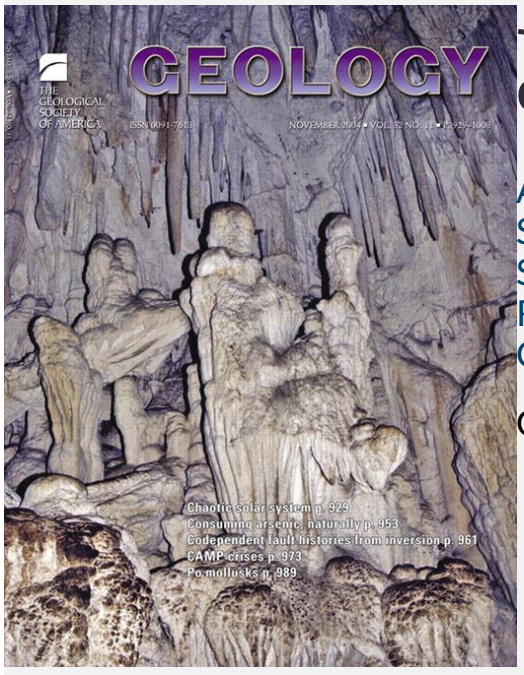


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## Synchrony of the Central Atlantic magmatic province and the Triassic-Jurassic boundary climatic and biotic crisis

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## Abstract

The evolution of life on Earth is marked by catastrophic extinction events, one of which occurred ca. 200 Ma at the transition from the Triassic Period to the Jurassic Period (Tr-J boundary), apparently contemporaneous with the eruption of the world's largest known continental igneous province, the Central Atlantic magmatic province. The temporal relationship of the Tr-J boundary and the province's volcanism is clarified by new multidisciplinary (stratigraphic, palynologic, geochronologic, paleomagnetic, geochemical) data that demonstrate that development of the Central Atlantic magmatic province straddled the Tr-J boundary and thus may have had a causal relationship with the climatic crisis and biotic turnover demarcating the boundary.

## Index Terms/Descriptors

absolute age | Africa | Ar/Ar | Atlas Mountains | basalts | biostratigraphy | catastrophes | Central Atlantic magmatic province | clastic rocks | correlation | dates | demagnetization | feldspar group | flood basalts | framework silicates | geochemistry | High Atlas | IGCP | igneous rocks | Jurassic | large igneous provinces | Lower Jurassic | magmatism | magnetostratigraphy | major elements | mass extinctions | Mesozoic | microfossils | Moroccan Atlas Mountains | Morocco | North Africa | North America | paleoclimatology | paleoecology | paleomagnetism | palynomorphs | plagioclase | sedimentary rocks | silicates | siltstone

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