

# **Paleoenvironmental reconstruction based on the revised continuous stratigraphy across the Triassic- Jurassic boundary in the Mino Belt, central Japan**

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The Triassic–Jurassic boundary (TJB) is marked by one of the big five biotic mass extinction events in the Phanerozoic. Anchoring at the TJB, previous stratigraphic framework in the Inuyama area of the Mino Belt established a floating astronomical time scale (ATS) converted from chert bed thickness variations. However, recent detailed stratigraphic studies indicated stratigraphic gaps by tectonic deformation across the TJB in the Inuyama ATS. Here we present paleoenvironmental reconstruction based on the revised continuous stratigraphy of the pelagic deep-sea rocks deposited in the Panthalassa across the TJB of the Mino Belt, central Japan. The cyclostratigraphic examination on the revised stratigraphy in the Mino Belt reveals ~1 myr gap across the TJB compared with the previous Inuyama ATS. The several layers showed high Cr concentrations (200–500 ppm) and low contents of redox sensitive elements with low redox potentials (e. g., Mo and U) in the latest Rhaetian, implying compositional effects from the Large Igneous Provinces and/or extraterrestrial impact. The Mg enrichment increased toward the Hettangian, suggesting enhanced inputs from the contemporaneous mafic materials like the Central Atlantic Magmatic Provinces. The low Mn enrichment with negative Ce anomaly indicated the development of suboxic conditions in the pelagic deep-sea realm of the Panthalassa during the latest Rhaetian.