

# Stratigraphic Markers of the Initial Collision of Arc-Continent in the Eastern Margin of the Paleo-Tethys During the Middle-Late Triassic in Si-chuan, China

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## Abstract

A series of plate convergence occurred during the Middle-Late Triassic in the eastern margin of the Paleo-Tethys in Si-chuan (China), which resulted in corresponding orogenic processes, thus becoming the key period and region for the study of the Paleo-Tethys. The initial time of plate convergence is the key point for the study of the whole orogenic belt. The uplift process of orogenic belts and the sedimentary response of foreland basins are important contents in the study of plate convergence. Based on the above analysis, this study intends to establish the key strata of the Middle-Late Triassic on the eastern margin of the Paleo-Tethys domain, and carry out comprehensive research on sedimentary petrology, sequence stratigraphy, geological chronology, source-to-sink path system and basin-mountain coupling. It includes the identification of the initial unconformity surface and the determination of the initial collision of the plate in the Middle-Upper Triassic foreland basin on the eastern margin of the Paleo-Tethys domain, the relationship between the development and death of reefs and the rate of plate convergence, the analysis of the source of black shale and near-source turbidite, and the study of volcanic ash intercalation and the limitation of the initial collision time of Arc-Continent. A multiple method for determining the initial time of plate convergence is tested and perfected to accurately determine the time of plate convergence in the key areas of the eastern Paleo-Tethys domain, and the process of plate convergence and evolution of sedimentary basins in the reconstructed study area.

*Keywords: Initial Collision of Arc-Continent; Eastern margin of the Paleotethys; Middle-Late Triassic; Foreland basin*

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