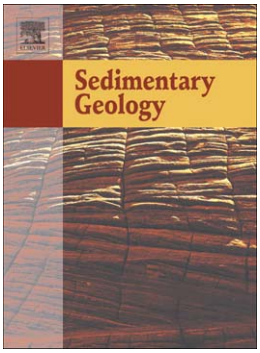

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Multiple provenance of rift sediments in the composite basin-mountain system: Constraints from detrital zircon U-Pb geochronology and heavy minerals of the early Eocene Jianghan Basin, central China

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Abstract

Zircon U-Pb geochronology and heavy minerals are used in combination to provide valuable insights into the provenance of the early Eocene Jianghan Basin, central China. Five samples for zircon U-Pb dating and eighty-five samples for heavy mineral analysis were collected from drill cores or cuttings of the Xingouzui Formation. Most analyzed zircons are of magmatic origin, with oscillatory zoning. Detrital zircons from sample M96 located on eastern basin have two dominant age groups of 113-158 Ma and 400-500 Ma, and the other samples located on southern basin have three prominent age populations at 113-158 Ma, 400-500 Ma and 700-1000 Ma. Samples on