

U-Pb Geochronological Studies on Detrital Zircon in Jianglang Group, Western Sichuan Province, China

YUAN Hua-yun¹, ZHOU Qing^{2*}, DING Jun², ZHANG Hui-hua²,
LI Tong-zhu², LIANG Jin³, Tang Gao-lin³, WANG Chang-nan³

(1. *Sichuan Institute of geological survey, Chengdu 610081, China*; 2. *Chengdu Institute of Geology and Mineral Resources, Chengdu 610081, China*; 3. *Ltd. Liwu Copper Mining Company, Ganzi 626200, China*)

Abstract: Jianglang dome is located in southeastern Songpan-Ganzi orogen, western Yangtze block. The LA-ICP-MS detrital zircon U-Pb study on biotite schists from Jianglang group shows that they are mainly dated from 537–2925 Ma. Comparative analyses reveal that the sources of these sedimentary rocks are mainly from Neo-proterozoic strata of Yangtze block. These zircons were mainly derived from magmatic events at about 548 Ma, 810 Ma and 2479 Ma, whereas the metamorphic events mainly occurred at about 918 Ma, 608 Ma and 100 Ma. The oldest age ranging from 2 925 to 2 462 Ma indicates that the Paleo-proterozoic even Archean basement exists in Songpan-Ganzi area. In addition, six younger zircons yielded ages of 537–559 Ma with a mean of (548 ± 9) Ma (MSWD = 1.4, 2σ). Thus, we propose that the Jianglang Formation belongs to Proterozoic Liwu group.

Keywords: Jianglang dome; Jianglang group; Detrital zircons; U-Pb dating; Yangtze block