

Duration of the formation of late paleozoic granitoids of Barguzin suite of Western Transbaikalia (U-Pb LA-ICP-MS dating)

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High-K calc-alkaline granites that were emplaced at the end of collisional stage and formed large Angara-Vitim batholith (AVB) and subordinate smaller plutons, totally of about 150,000 km² in area. All these rocks were recognized as Barguzin igneous suite

New Wave Research UP-213 laser ablation device and single collector ICP-MS Thermo Scientific Element XR were used for U-Pb analysis. Data processing was performed using Glitter software, and U-Pb concordant ages were calculated by Isoplot 3 macro.

U-Pb isotopic LA-ICP-MS dating of zircons from granitoids of Barguzin suite has confirmed the results of previous geochronological studies, which included geological observations and U-Pb SHRIMP dating, that Late Paleozoic magmatic activity started about 330-325 Ma ago with the formation of the Barguzin granites [1] [2]. We should add that the resulting U-Pb LA-ICP-MS zircon age for the sample Br-2-02 (301.6 ± 2.2 Ma) and V.P. Kovacs data [3] allow to move the upper age limit of formation of the Barguzin suite granites from 310 Ma to 295 Ma. In this case, the crystallization of the youngest Barguzin granites substantially overlap in time with the formation of high-K calc-alkaline low-silica granitoids of Chivyrkui and leucogranites of Zaza suite granitoids.

Pluton	LA-ICP-MS, Ma	SHRIMP, Ma [1, 2]
Zelenogrivsky	323.7±2.1	325.3±2.8
Temen	316.6±2.3	318±4
Goltsov	312.3±2.2	313.3±3
Br-2-02 granitoids from Khangintui river	301.6±2.2	

Table 1: Results of the U-Pb isotope dating of zircons from calc-alkaline granites of Barguzin suite.

[1] Tsygankov et al. (2007) *Russian Geology and Geophysics* **48**, 120–140. [2] Tsygankov et al. (2010) *Russian Geology and Geophysics* **51**, 972–994. [3] Kovach et al. (2012) *Dokl. Acad. Nauk* **444**, 184-189.