PALEOPROTEROZOIC POSTCOLLISIONAL MAGMATIC BELT OF THE SOUTHERN SIBERIAN CRATON

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Paleoproterozoic time is characterized by large-scale collisional and postcollisional magmatic activity evidenced in the most of ancient cratons. This global event is related to the Arctic supercontinent assemblage (Rogers, 1996). The formation of postcollisional magmatic belt at 1.9-1.8 Ga within the south-west flanking of the Siberian craton is a remarkable example of these processes happened during overall lithospheric convergence. This belt is extends for about 3000 km from the southern Enisey ridge at the west to the central Aldan shield at the east.

Within the central Aldan shield the latest collisional event occurred 1925+/-5 Ma (Kotov et al., 2003) and post-collisional subalkaline S- and I-type granites emplaced at 1916+/-10 Ma (Bibikova et al., 1989), 1901+/-1 Ma (Frost et al., 1998) and 1899+/-6 Ma (Kotov et al., 2003). However at the southern Olekma terrain (western Aldan shield) the syncollisional granites have formed at 1906+/-4 Ma and postcollisional Kodar granitoids were generated at 1876-1873 Ma (Larin et al., 2000). The is a tendency outlined in timing of postcollision processes to the west (in modern coordinates). Ages of postcollisional Kevakta granitoid plutons (1846+/-8 Ma) and volcanics of North-Baikal volcano-plutonic belt (1869+/-6 Ma Ú 1856+/-3 Ma), Baikal folded area, support this tendency.

Emplacement of the Primorsky complex postcollisional rapakivi-type granitoids (southern Baikal lake) occurred at 1859+/-16 Ma (Donskaya et al., 2002). New results of U-Pb single zircon and baddeleyite dating demonstrate that formation of late-
synkinematic syenite, charnockite and pegmatitic veins (1856±12 Ma, 1853±20 Ma) and calciphyre (1868±2 Ma) within the eastern part of the Sharyzhalgay block (southern Baikal lake) occurred virtually within the same episode. Postcollisional intrusive charnockite of the Shumikha complex from the western Sharyzhalgay block dated at 1861±1 Ma (Donskaya et al., 2001) and 1871±17 Ma (Levitsky et al., 2002). Subalcaline granites of the Sayan complex (Biryusa block) also having postcollisional features emplaced at 1858±20 Ma (Levitsky et al., 2002). Youngest postcollisional granitoids (Tarasky massif, 1838±2 Ma; Nozhkin et al., 2002) is located within the western part of this huge magmatic belt at the Angara-Kansky block.

Available geological, geochemical and high-precision geochronological data on the Paleoproterozoic granitoids of postcollisional magmatic belt evidence that the accretion of continental blocks and terrains constituting the Siberian craton occurred progressively towards to west in modern coordinates and completed to 1900 Ma at the eastern Aldan shield and only at 1840 Ma in the Angara-Kansky block (in vicinity of the Enisey Ridge).