

## Archean Belomorian collisional orogen: new data and implication for supercontinent reconstruction

ALEXANDER SLABUNOV <sup>1</sup>

<sup>1</sup> *Institute of Geology, Karelian Research Centre, RAS, Pushkinskaj, 11, 185910, Petrozavodsk, RUSSIA, slabunov@krc.karelia.ru*

An assembly of Meso-Neoproterozoic igneous (TTG-granitoids and S-type leucogranites and calc-alkaline-, tholeiite-, komatiite-, boninite- and adakite-series metavolcanics) and metamorphic (2.88-2.82, 2.72 Ga eclogite- (Li et al, 2015), moderate-pressure (MP) granulite- and MP amphibolite-facies rocks) complexes is preserved in the Belomorian province (BP) of the Fennoscandian Shield.

There are four subduction-accretion events in BP: 2.88-2.82, 2.81–2.78 2.75 and 2.73-2.72 Ga (Slabunov, 2008)

From ca 2.71 Ga collision tectonics manifested itself in BP as nappean-folded, MP metamorphism (kyanite–orthoclase subfacies) and S-type granite formation. A new isotope study of zircons from leucosomes of kyanite-orthoclase gneisses and granites, whose formation is attributed to collisional processes, yielded an age of  $2687 \pm 31$  and  $2706 \pm 14$  Ma, respectively (Slabunov et al., 2016), which is interpreted as the exact time of collision.

Archean Belomorian collisional events are correlated with 2.68 Ga Minnesotan orogeny (Supirior Province) and Neoproterozoic (2.7-2.67 Ga) processes in the Limpopo complex, South Africa. Reconstructions, based on paleomagnetic data (Lubnina & Slabunov, 2011), suggest that the above Neoproterozoic complexes are part of one orogenic belt which marks the formation of Kenorland Supercontinent.

This is a contribution to RFBR Project 15-05-09288.

### References:

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