

## **CONTINENTAL CRUST GROWTH IN SVECOFENNIAN ACCRESIONAL AND BELOMORIAN COLLISION OROGENS**

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A growth of new continental crust within two standart early Precambrian terranes, the Svecofennian accretional and Belomorian collisional oregens have been considering.

In the Svecofennian origen the basins developed near and in connection with volcanic arcs existed not more than 30 Ma. Plutonic rocks generated during 1.9 to 1.86 Ga period. Systematic of the available Sm-Nd isotope data and, in particular, calculation the  $T_{DM}$  model ages which are of 2.3-2.4 Ga provide the conclusion that their magma on the active continental margin was emplaced from juvenile Proterozoic sources and contaminated by metasedimentary rocks contained the Archaean clastic material.

Within Belomorian collisional the most ancient event related to development of the volcanic arcs near the both sides of the Late Archaean continental margin (ca 2.85 Ga) and accretional prism in connection with subduction of oceanic crust under continent, that was accompanied by new mostly tonalite crust formation which started ca 2.80 Ga ago and was completed by 2.74 Ga ago. In the lower part of the late Archaean Belomorian allochthone is identified as moderate-pressure granulite metamorphism which was coeval with plutonic activity led to formation of calc-alkaline assemblages of the igneous rocks (2.72 Ga) geochemically similar to those of the active continental margine of the Andian type.

Development of the Early Proterozoic nappe was accompanied by high-grade (up to granulite facies) metamorphism which overprinted on arc type of plutonic rocks (1.91 Ga).

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