

# **ARCHAEAN AND PALEOPROTEROZOIC CONTINENTAL GROWTH: QUANTIFYING TIMESCALE AND PRECAMBRIAN SUPERCONTINENTS**

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The quantifying timescales for early Precambrian geological history were created on the base of new data on age determinations for the principal localities. The most ancient continental crust was resulted from permanent processes during Early, Middle and partly Late Archaean major cycles. There are limited amount of small fragments of this crust which consist of mainly enderbite and tonalite gneisses and supracrustal rocks. A duration of the studied cycles is near by 400-500 Ma. The first continental blocks seems to form isolated terranes in the "hot spots" on the primary lithosphere. Transient processes of continental crust generation began near 3.00 Ga ago around the Early and Middle Archaean continental cores. It is characteristic developing couples of simultaneous structures, greenstone and paragneiss belts, which imitate volcanic arc and behind arc basins. Tonalite-trondhjemite and diorite-mangerite-granite Ca-alkaline plutonic series relate to those tectonic pairs and represent the new continental crust forming of which is always accompanied by high-T and low-P metamorphism. Three cycles of crust formation can be identified, 3.0-2.85, 2.85-2.70, 2.70-2.55 Ga. Last cycle is differed from the others by occurrence of collision zones (high-pressure metamorphic belts) connected with accretion of late Archaean supercontinent. Its disintegration and formation of rift systems and interplate basins were realized 2.45 to 2.0 Ga ago. In the same time development of the active continental margins resulted in a new crust generation which was continued after the 1.90-1.95 Ga age collision of the formed plates which led to the appearance Paleoproterozoic supercontinent.