U-PB DATING OF TWO PRECAMBRIAN METAMORPHIC EVENTS DIVIDED OF GABBROS INTRUSIVE. (KOLA STRUCTURE OF THE KOLA PENINSULA)

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The Kola basement complex of the non-stratified rocks in the region under the consideration is represent by the granite-gneisses with the relicts of the biotite, biotite-amphibole, garnet-biotite plagio-gneiss and amphibolites. The garnet-biotite gneisses have been crosscut by gabbros. In garnet-biotite gneiss zircons occur as prismatic crystals displaying a range in color from deep brown to very pale brown. The deep brown zircon is zoned with dark cores, zoning part and pale rims. The pale brown zircon shows no zoning. The pale rims of the deep brown crystals and pale brown crystals are the same and indicate the gneiss metamorphism. The pale brown zircon populations yield an age about of 2806 Ma. The dark zircon has not been dating. In meta-gabbros zircons occur as prismatic crystals exhibiting a range in color from deep brown to very pale brown. The pale brown zircons having bad outlines suggested their primary magmatic origin in the mafic rock yield an age of 2584(+/-)5 Ma. The deep brown zircons with numerous faces on the crystal surfaces indicate their metamorphic origin yield an age of 2507(+/-)10 Ma. Thus, some U-Pb ages of the processes are obtained: 2806(+/-)101 Ma - for the metamorphism of garnet-biotite gneiss, 2584(+/-)5 Ma - an age corresponding to the time of the gabbro emplacement, and the age defined to be about 2507(+/-)10 Ma correspond to the time of the metamorphic events.