Petrology of Gneiss-Migmatite Complex of the Khrami Crystalline Massif

Ketevan Teliashvili

E-mail: ketevan.tedliashvili@tsu.ge
Department of Geology, Ivane Javakhishvili Tbilisi State University,
I. Chavchavadze ave. 3, 0179, TSU, house II.

The Khrami crystalline massif represents salient of the pre-Alpine basement of the Black Sea – Central Transcaucasian terrane. It's built-up by Precambrian gneiss-migmatite complex and Late Variscan granitoids. The latter is the major object of the research.

Detailed petrographic and mineralogical characteristic of the Khrami massif gneiss-migmatite complex has been accomplished. Is given comperative analysis of the gneiss-migmatite complex of the Khrami and Dzirula massifs. The novelty of the research is also comparison of gneiss-migmatite complexes of the Khrami crystalline massif and its Aslanura block in petrochemical framework.

The major rock-forming minerals of the gneiss-migmatite complex (cordierite, biotite, plagioclase, horblende, potassic feldspar, muscovite, chlorite) have been studied in detail by microprobe method.

By means of geochermometers, and standard petrogenic schemes of base mineral paragenesises as well have been estimated PT conditions of polycycle regional metamorphism of the Khrami crystalline massif: Precambrian prograde - T=720-770^{0}C, P<1,5 kbar and Late Variscan retrograde - T=430-510^{0}C, P=1.3-0.6 kbar. Is given petrogenic model of the pre-Alpine regional metamorphism.

Have been determined heterogenic constitution of zircons where polimetamorphism is exposed, in particular in the core of the zircon crystal is fixed Grenvilian age - 905-931 Ma and in its peripheral part Late Variscan age - 320-330 Ma is established.

Based on isotopic-geochronological, geological and petro-monelalogical data is represented the formation model of the pre-Alpine continental crust of the Khrami massif: