

New Field, Petrographic and isotopic Data: Implications for Relocating the Highland-Vijayan Boundary of Sri Lanka Precambrian

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Highland Complex (HC) of Sri Lanka is composed of granulite grade, intensely deformed supracrustal rocks, granitoid rocks and minor metabasites, all with an extended crustal history ranging from 02 to 03 Ga. To the east of HC is the Vijayan Complex mainly made of amphibolite facies migmatitic gneisses and granitic gneisses having younger model ages between 01 and 02 Ga. Thus describing the presently demarcated boundary between two complexes as a tectonic boundary is justifiable.

Recent field work and petrographic studies have shown that remnant of retrogressed charnockite and pelitic rocks (sillimanite bearing biotite Gneisses) occur some 35 km well into the Vijayan Complex from presently demarcated boundary. If the on-going isotope studies also confirm that these remnant rocks are true Highland rocks it can be postulated that the true Highland/Vijayan boundary is some 35 km further east to the present boundary and there is a wide (30-40 km) retrogressed belt between two units.