

## **Tectonothermal events in the Eastern Ghats Belt: Implications for the East Gondwana-Rodinia correlation**

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Recent studies from the Eastern Ghats Belt (EGB) suggest that this belt is mostly composed of Paleoproterozoic precursors affected by 2.0-1.9 Ga, 1.5-1.4 Ga, 1.1-1.0 Ga, and 0.6-0.5 Ga tectonothermal events (Shaw et al., 1997, *J. Geol.* 105, 645-656; Sarkar & Paul, 1998, *Geol. Surv. India Spl. Pub.*, 51-86; Takano & Arima, 1999, *Abst. Japan EPS Meeting*). In the central part of EGB, the 2.0-1.9 Ga events reflect convergent tectonothermal events and the 1.5-1.4 Ga events include basic magmatism under an extensional tectonic regime.

Finding of coexisting corundum and quartz from the Rayagada area revealed a dramatically high pressure and ultra-high temperature conditions (Shaw & Arima, 1998, *JMG.* 16, 189-196). A decompression from over 1.2 to 0.9 GPa under ultra-high temperatures (950-1100°C) followed by nearly isobaric cooling may indicate a possible early continent-continent collision followed by rapid uplift associated with extensional lithosphere collapse. This ultra-high temperature decompression can be referred to the 1.1-1.0 Ga events reflecting the tectonics associated with the amalgamation of Rodinia-East Gondwana.

The 1.1-1.0 Ga events include charnockitic magmatism. The 0.6-0.5 Ga events in the EGB characterized by strong thermal rejuvenations (Takano & Arima, 1999; Mezger & Cosca, 1999, *Precambrian. Res.*, 94, 251-271) took an integral part in the major Pan African tectonothermal events within East Gondwana, which are continuous from Madagascar, Sri Lanka and East Antarctica.