

**GEOLOGY,STRUCTURE, METAMORPHISM  
AND TECTONIC SETUP OF 3.4 b.y OLD  
BILIGIRIRANGAN GRANULITES: SOUTH  
INDIA.**

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The comprehensive tectonic frame work of the study area inferred from detailed structural analysis of the various folding and fracturing indicates that the entire area witnessed three major tectonic events, marked by major N-S lineament like Kollegal in the western part E-W trending Moyar shear zone in South and Cauvery in the North. All these lineament from a rectilinear E-W trending escarpments in Biligirirangan hills. There are three deformational events (D1, D2 and D3 with F1,F2& F3)have been recognised and three types of metamorphism M1.M2 and M3. M 1= $\sim$ 2.9 b.y M2= $\sim$ 2.5 b.y M3=Last retrogression. Formation of incipient charnockite has been reported from West of Biligirirangan hills are Swarnavati dam locality and its age has been attributed to 2500 Ma.. Incipient charnockitization a late shear zones related phenomenon. Regional P-T estimates are  $P=6.1$  to  $7.3$  k.b.  $T=750^{\circ}$  - $900^{\circ}$  C, indicating depth of burial of granulites about 30 to 35 Kms around 2.5 b.y. ages. U/Pb Zircon data for Biligirirangan granulite indicate an older protoliths age of 3.4 B.Y and a 2.9 and 2.5 B.Y age for granulite facies metamorphism.