

Structural implications of a new geological map of Kandy Sheet, central Sri Lanka

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Abstract: Remapping of Kandy Sheet has clarified the nature and distribution of Kandy and Arena gneiss groups but not provided an unequivocal explanation of their relationship. In the terms of Berger and Jayasinghe (1976), as modified by Yoshida (1990), remapping has revealed several large D2 isoclines and one associated thrust within the Kandy Gneiss. No large D2 folds were found in Arena Gneiss, or affecting the boundary between the two groups. The D2 isoclines were refolded by Taprobanian (D3) folds trending NW, and large-scale décollement took place along a marble horizon SW of Kandy during the same fold episode. The area is transected by several NW-trending faults and one large shear zone. Associated mesoscale folds deform the D3 folds, and these folds as well as the faults and shear zone are assigned to the D4 stage of Yoshida (1990).

Recent isotopic data indicate that, although the two gneiss groups have very different primary ages, both were metamorphosed during a single, Panafrican episode (550 \pm 100 Ma; Hölzl *et al.* 1991). Since peak metamorphism was associated with early (D1?) deformation, this evidence of age, if accepted, also implies that the whole discernable structural evolution is also Panafrican. The apparent absence of D2 major folds affecting Arena Gneiss, and the low strain intensity shown by Arena Gneiss, compared with Kandy Gneiss, remain as puzzling structural features.