

## PRECAMBRIAN AND POST-PRECAMBRIAN TECTONIC REGIMES OF SRI LANKA

K.V. Wilbert Kehelpannala

(Earth Sciences, Institute of Fundamental Studies, Kandy)

### ABSTRACT

Folded and linear structures were analysed from the Landsat imagery and from published structural maps. Attempts were also made to work out the principal stresses by which the structures were formed.

Most predominant Precambrian structures in Sri Lanka are minor isoclinal folds, boundins, lineations, major folds, and shear zones that have been formed under plastic conditions by horizontal compressive stresses during the Precambrian orogenies. Six Precambrian structural domains, four from the Highland Group and two from the Vijayan Complex, can be identified by studying the orientation of the axes of major folds. The latest Precambrian stress system of the Highland Group may be described as a "primary thrust regime" in which the greatest and intermediate principal stresses are horizontal and the least principal stress is vertical.

Almost all post-Precambrian structures are minor and major lineaments (joint zones, fracture zones or fault zones). They could have been formed under the brittle conditions of rock failure, at the time of the separation of India from Antarctica during the post-Gondwana periods. The post-Precambrian (post-Gondwana) lineaments seem to have been formed by a horizontal compressive stress. The post-Precambrian stress system of the entire terrain could be

described as a "primary wrench regime" in which the greatest and least principal stresses are horizontal and the intermediate principal stress is vertical.

REFERENCE

1. Harland, W.B. and Bayly, M.B., 1958. Tectonic Regimes  
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