

Topographic characteristic in Southeastern Taiwan and Its Tectonic Implication

Pei-Kun Liu¹ and Gwo-shyh Song¹

ABSTRACT

A series of hinge-arc'd mountains located in the southern part of Central Ridge in the southeastern Taiwan. The eastward extension of the hinge-arc'd mountains through Southern Longitudinal Trough to Hautung Ridge was proved by hinge arc trace, hinge arc locating center, band pass filter topographical data procedures and the seismic profiles. Recent major epicenter data showed that there is high correlation between epicenter distribution and hinge-arc'd center. That phenomenon implied that the Eurasia continental plate colliding with the Philippine sea plate in a geometry of obtuse angle concentrated the stress on the Taiwan island and created the hinge-arc'd mountains.

(**Key words:** hinge-arc'd mountain, topographical lineation, topographical filter, plate motion.)

智慧藏

¹ Institute of Oceanography, National Taiwan University, Taipei 106, Taiwan.