



New zircon geochronology and geochemistry of metaigneous rocks from Hongseong: Implications for Neoproterozoic to Mesozoic tectonic evolution of the southwest Gyeonggi block, Korea

Weon-Seo Kee and Sung Won Kim

Korea Institute of Geoscience and Mineral Resources, Geological Research Division, Daejeon, (wskee@kigam.re.kr, 82 42 868 3413

The Hongseong area, located in the southwest Gyeonggi block of the Korean Peninsula, consists of Paleoproterozoic, Neoproterozoic, and Paleozoic complexes that were regionally metamorphosed during the Triassic collision between the North and South China blocks. New SHRIMP U-Pb zircon geochronological and geochemical data support the following tectonic model for the area: (1) arc magmatism caused during amalgamation of the Rodinia continent at ca. 850-830 Ma (Deokjeongri unit), (2) a second cycle of arc magmatism at ca. 800-750 Ma containing Island arc tholeiites or basalts (the boundary between the Deokjeongri and Wolhyeonri units), (3) rifting and subduction along the central orogenic belt caused HP metamorphism at ca. 500-400 Ma (the Wolhyeonri unit), and (4) a major subduction and collision event between the North China and South China blocks produced extensive Triassic HP metamorphism in the Hongseong area. These data are similar to those from the central collisional belt (Qinling-Dabie belt) in China.