

K-Ar Age-dating Results of Some Major Fault in Southeastern Fault activation & Diagenetic Process for Fault Gouge

Seong-Sik Hong

Mineralogy Lab

Dept. of Earth System Sciences, Yonsei University

This study shows the results of the Age dating through K-Ar Age Analysis for the size separated fault gouge sample of major faults in the southeastern Korean peninsula. Fault activation age was analyzed based on the mineralogical characteristics of the sample. Fault Activation from the southeastern part of the Korean peninsula can be interpreted that there were at least three fault activation in the southeastern major faults, about 50 Ma, just after 30 Ma and 20 Ma. The fault activation age tend to appear younger at the northern end of the fault. The fault activation in the periods of 30 Ma and 20 Ma are concentrated in the Ocheon faults and its associated faults and the Gyeongju branch faults. The determination of the major faults activation age in the southeastern peninsula will provide periodicity and Spatial occurrence time information for establishing the Southeastern fault evolution model. In addition, the study of Fault Activation dating above have limitations in the interpretation for multi-stage fault activation and diagenetic process. Therefore, Further study for morphological and mineralogical analysis (using X-Ray Diffraction(XRD), Scanning Electron Microscope(SEM), Electron Probe Micro Analyzer(EPMA)), and K-Ar Age Analysis through the Fault fracture zone will provide information for th Fault system generation