

# **The correlation between Neoproterozoic Igneous activities related to Rodinia supercontinent in Korean Peninsula and China**

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The Neoproterozoic rocks related to the formation and break-up of Rodinia supercontinent were reported in China Cratons and Korean Peninsula. We studied the Neoproterozoic igneous rocks in the Dangjin and Gonamsan area located in the southwestern part and northern part of the Gyeonggi Massif in Korean Peninsula respectively. The Neoproterozoic igneous rocks in the Dangjin area can be classified into three types of amphibolites and two types of biotite gneisses based on age and tectonic environment. The first type amphibolite formed at 833-793Ma in the arc tectonic setting and the second type formed at 797Ma in the back arc tectonic environment. The third amphibolite formed at 760Ma in the within plate tectonic environment. One type biotite gneiss intruded in the arc tectonic setting at 833Ma while another type intruded in the post collision tectonic setting at 837-809Ma. This study together with the previous studies indicates that the Dangjin area were arc environment during 900-833Ma and then changed into collision and subduction coexisted environment during 837-809Ma. Finally the area was changed into rift tectonic setting during 774-703Ma. This study together with previous studies indicates that the Dangjin area can be correlated to the northern margin of the South China Craton in which arc-and rift-related igneous rocks intruded at age older than 890Ma and during 800-760Ma, respectively. The Gonamsan amphibolite intruded at 873-851Ma formed in the within plate tectonic while amphibolite with similar intrusion age in the Dangjin area formed in the arc tectonic setting. This and previous studies suggest that the Gonamsan area together with the Sangwon system can be correlated with the Qingbaikou system which formed along the southern margin of North China Craton in the within plate tectonic setting during 925-810Ma.