Configuration of Crustal Blocks surrounding Central India during the Proterozoic

Masaru Yoshida[1]

[1] Biol. and Geosci., Osaka City Univ.

Juxtaposition of the the Central Indian Tectonic Zone (CITZ) with candidate areas within the Proterozoic Gondwanaland ensemble is examined. Comparison of event stratigraphies of these areas indicate that extension of CITZ to the Arabian Nubian Shield westward is difficult. The eastern extension is partly possible with all possible mobile belts. It is suggested that the configuration of cratonic blocks surrounding the eastern side of India, i.e., continuation of mobile belts, changed from the Paleoproterozoic to Mesoproterozoic. The Pinjarra Orogen of western margin of Western Australia might have played a fundamental role in the assembly of cratonic blocks of this part of East Gondwana during the ca 1000 Ma Circum East Antarctic/Grenvillian orogeny.

Candidates of juxtaposition of the Central Indian Tectonic Zone (CITZ) of Central India within the Proterozoic Gondwanaland ensemble include the Arabian Nubian Shield and Aravalli-Delhi belts to the west and Western Australia, Eastern Ghats Mobile Belt and East Antarctica to the east. Comparison of event stratigraphies of these areas indicate that extension of the CITZ to the Arabian Nubian Shield westward is difficult. The eastern extension is partly possible with all possible mobile belts. It is suggested that the configuration of cratonic blocks surrounding the eastern side of India, i.e., continuation of mobile belts, changed from the Paleoproterozoic to Mesoproterozoic. It is possible that the Pinjarra Orogen of western margin of Western Australia played a fundamental role in the assembly of cratonic blocks of this part of East Gondwana during the ca 1000 Ma Circum East Antarctic/Grenvillian orogeny.