

Mesozoic Geodynamic Evolution of the East Asia

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Reliable Late Paleozoic to Mesozoic paleomagnetic data from East Asia are analyzed and simulated in this presentation. The kinematics of block motions are investigated for three major blocks of the NSKB (North Sino-Korea Block), SSKB (South Sino-Korea Block), and Siberia Block during Mesozoic. Different timing of collision, metamorphism, amalgamation, and orogenic history for the individual micro blocks give insights into the geodynamic evolution and circumstance of the East Asia. This model is represented by following scenarios evidently supported by geochronologic, paleontologic and metamorphic data.

- (1) The NSKB was drifted northward from Gondwana margin in the Late Permian, and the western end of the NSKB collided to the Siberia Block
- (2) The NSKB was subsequently collided by the SSKB, and then was divided into two parts in the Early Triassic
- (3) The larger NSKB-I rotated counter-clockwise while the smaller NSKB-II rotated clockwise
- (4) The SSKB was trapped between NSKB-I and NSKB-II (Fig. 1)
- (5) The NSKB and SSKB became in one unit since the Middle Jurassic
- (6) The united SKB (sino-Korea Block) were completely amalgamated to the Siberia since the Early Cretaceous.

Keywords: Paleomagnetism, Mesozoic, collision, amalgamation, East Asia

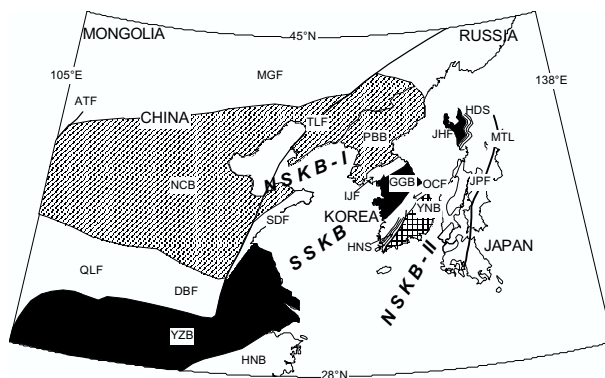


Fig. 1. Tectonic frame of the East Asia. Tectonic units consist of the NSKB-I(=NCB+PBB, hatched), the NSKB-II(=YZB+GGB+JHF, black), and the SSKB (YNB+JPH, checked)