

## Sequential double-saloon-door opening along the eastern margin of the Asian continent

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It is well known that NE and SW Japan rotated in opposite directions like the opening of double-saloon-door. New ages are determined for the opening of these doors on the basis of compilation of newly and recently published paleomagnetic and chronological data set. Data set from SW Japan indicates that large easterly deflected declinations (between 40° and 60°) has been maintained until 14.8 Ma, however cessation in clockwise rotation (CW) of SW Japan occurred at  $14.2 \pm 0.6$  Ma. Combination of new data with the previously published available data for NE Japan suggest that CCW rotation of about 50° of the province of NE Japan probably occurred later than 17.2 Ma and it was still experiencing a counter-clockwise rotation at  $16.5 \pm 0.8$  Ma, however by  $14.4 \pm 0.9$  Ma rotational motion has completely ceased. We conclude that opening of double-saloon-door of NE Japan and SW have already been ceased by 14 Ma and that the Japan Sea opened at about 15 Ma.

Several paleomagnetic studies in the eastern part of the Asian continent show that another double-saloon-door opening took place prior to the opening of the Japan Sea. The eastern part of the Mongolia Block experienced CCW rotation, while the eastern part of the North China Block has been subjected to CW rotation until 70 Ma. This double-saloon-door opening is ascribed to post-Late Cretaceous extension that affected the continental basins (the Middle Amur, Sanjiang, Razdolnjan, Amur-Zeya and Songliao basins) of the northeast Chinese Plain along the eastern margin of the Asian continent.

Opening of double-saloon-door accompanied with tectonic extension occurred at least twice along the eastern margin of the Asian continent.