

Back-arc basins of plume origin

Tetsuzo Seno [1]

[1] ERI, Univ of Tokyo

The stress state of back-arcs are mostly determined by the slab stresses. There are a few rare cases where the back-arc is tensional while the subducting slab is in down-dip tension. They are the Marianas, Kyushu-N. Ryukyu, and the Aegean. We show a possibility that

- the lateral flow beneath the upper plate spread from the deep mantle upwelling can cause the stress gradient and back-arc tension in these arcs.

The stress state of back-arcs are mostly determined by the slab stresses. There are a few rare cases where the back-arc is tensional while the subducting slab is in down-dip tension. They are the Marianas, Kyushu-N. Ryukyu, and the Aegean. We show a possibility that

- the lateral flow beneath the upper plate spread from the deep mantle upwelling can cause the stress gradient and back-arc tension in these arcs.