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SCG66-P04 Room:Poster Time:April 30 18:15-19:30

Reason for strange appearance of Mt. Hakone, and Reason why the Boso Triple Junction has moved to the west most

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[1]none

(Refer to the chart)

Mt. Fuji penetrates through the north end of the Philippine Sea Plate(PHSP), and is the front of land side plate incision, and is the starting point of Suruga and Sagami Trough(1). Mt. Hakone and Mt. Mihara have decided the position of Sagami Trough.

”Tokai Slab” seems to stop beneath the north side of Mt. Fuji. On the other hand, ”Sagami Slab” seems to sink and reach the interior of Kanto.(3) It is unnatural as one board. Though the crustal deformation that GPS caught shows that the Izu Peninsula moves to the west, tendencies of Izu islands and Southern part of Kanto to move to the north are strong(4). In 135-140∗east, it has been understood that the section of especially 140∗meets the requirement of the temperature structure that the power to make the Pacific Ocean’s side go north is generated. In a word, I think that only the side of ”Sagami Slab” sank greatly in PHSP in the past and the current situation was caused.

Then, where is the crack (lateral fault) that becomes a boundary? There is the earthquake-prone zone that symbolizes subducting of Slab on the north side of the Mt. Hakone(5). If the edge of west side within the range of that distribution is traced, the Mt. Hakone and Mt. Mihara can be connected in a smooth line(red broken line). The line of blank for south-north, that divides the earthquake-prone zone to the east and the west, passes the Mt. Hakone(blue broken line). Because there was no fault in the south from Mt. Mihara, I think the slipping fault shifted to the fault shown in blue broken line though there was an age that the fault shown in red broken line slipped. The Mt. Hakone has the meaning of the west edge of PHSP in the Izu-islands-east and of the starting point of subducting.

On the other hand, why has the trench axis around the Boso Triple Junction moved to the west most? Pacific Plate that goes west compresses land side Plate and PHSP that get on on it into the direction of east-west. And, pulls them for south-north. The Part where land side Plate and PHSP overlap shifts mutually and the overlap becomes shallow. The upper plates expand for south-north to Pacific Plate. As a result, the trench axis becomes easy to go west by the east-west compression. Land side Plate and PHSP and Pacific Plate become tight in the direction of east-west. And, fold and collapse occur in them. As a result, the trench axis becomes easy to go west further. Because usual stresses are absorbed to the fold and collapsing, the trench axis is not easy to returns east even if a massive earthquake occurs. This is the cause that the trench axis moves to the west.

Reference literature

(1)Hirofumi MASE(2009)/SSJ2009/P3-64/http://jglobal.jst.go.jp/detail.php?JGLOBAL_ID=200902239527416838

(3)Shinji TODA(2005)/A new image of plate configuration and seismotectonics of the triple junction beneath the Kanto region/Fig.1(Noguchi1999)/AFRC.AIST/release06/10/2005/http://www.aist.go.jp/aist_j/new_research/nr20050610/nr20050610.html

(4)GSI/Animation of Crustal Deformation in Japan/http://mekira.gsi.go.jp/ENGLISH/crstanime.html

(5)JMA/Monthly Report on Earthquakes and Volcanoes in Japan December 2001/Tokai and South-Kanto/Fig.5/http://www.seisvol.kishou