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SSS30-P01 Room:Poster Time:April 29 18:15-19:30

Close examination of universality of matter off Miyagi that earthquakes advanced toward the east

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I explained how the surrounding of the plate boundary is always compressed(1). I reproduced the Off-Miyagi by the easy experiment(2). I understood earthquakes off Miyagi gradually climbed the slope of the plate boundary. The head within range where small earthquakes occur advanced toward the east gradually and went beyond the hypocenter of 3.11 in November, 2010.(3)

Therefore, the model of off Miyagi is the following. The earthquake of M7 class occurs in several decades by one degree. In every case the hypocenter of it moves east. And, the rear side of it slips to a deep point. The moderate quake guides the earthquake of M7. And, the front of crack is formed. Slip-all-together occurs if the front of crack arrives at a proper place. The feature of this model is to be able to give the answer to the following three large problems at a time. (a)A lot of people think that it is generated repeatedly within the specific range. (b)The cause of the swerve that causes large slip in every case is not discovered. (c)Finally happening is that a shallow part is destroyed at a time.

I want to think about (IC)Off Iwate-Chubu,(IH)Off Iwate-Hokubu,(AT)Off Aomori-Toho,(TK)Off Tokachi referring to (MY)Off Miyagi(Fig.1). The 1968 Tokachi-oki earthquake and the 1994 Sanriku-Haruka-Oki earthquake occurred in (IH)(AT). The co-seismic slip distributions on the map of (4) is interesting. Though the rupture starting point and the main rupture zone can be understood of those relation of upper-lower part on slope, both are considerably away. This is a feature and it is necessary to be clarified. I interpret that a main rupture zone is the peak of slip nearest the trench. The 1968 earthquake has two large slip zone. The main rupture zone in the south is located in lower part of the main rupture zone of the 1994 earthquake on slope. I want to pay attention to that. I think the 1968 earthquake went with the earthquake that had to happen ahead of the 1994 earthquake. The earthquakes that occurred in the vicinity in the past(5) have the possibility that there were rupture zones in lower part of the 1968 earthquake or the earthquake that had to happen ahead of the 1994 earthquake on slope. Therefore, I think that (IH)(AT) walks on the road similar to (MY). And, that a shallow part can slips and timing is only waited for. We should think that the earthquake similarly climbs the slope also in region (TK).

Range (39N-40N,143E-144E) in region (IC) is the earthquake-prone zone of small and medium-sized earthquakes after 1923. It is seen that there are a lot of intraplate earthquakes(12). The lower plate always collapses due to the earthquakes and the material overflows up and accretionary wedge will be made. The upper plate relatively becomes long and swells because the lower plate shortens. And, the vicinity of the surface comes into a expansion field. And, steep cliffs are formed and fall because the upper plate surges to the trough. This will explain the geographical features of (IC) shown by (9) and the cause. The expansion field in the vicinity of the surface causes the occurrence of the lateral-fault type(10). The structure of the cliff where the sudden falls easily happen reacts sensitively to peripheral earthquakes. In addition, it has the possibility that is an efficient tsunami generator. This harmonizes with the result of (11).

Reference literature (Details are described to space in the drawing)

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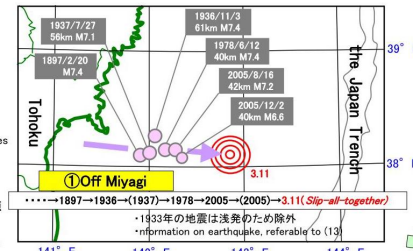

Fig.1 earthquakes climbed up (Off Miyagi)

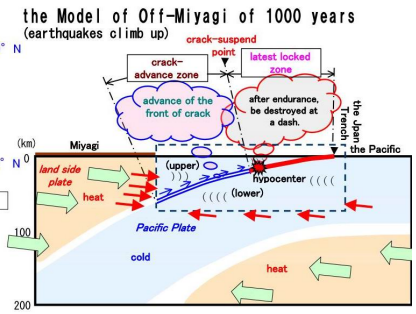

Fig.2 Model cross section intersecting squarely in the Trench and crossing over Miyagi