

Relationship between half-graben and high-velocities area at depths of 10 km in KantoArea 2

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[1] none

1. The distribution of half-graben (Takahashi 2005) seems to coincide with the location of high-velocities area at depths of 10 km in Kanto area (Matsubara 2005)..

There is half-graben in Chichibu, Kawagoe, Itsukaichi, Hokota,Hukaya, Kinugawa area.

These areas and Tsukuba , Kasama areas also have high-velocities location at depths of 10km .

But in Tsukuba and Kasama areas, half-graben has not been reported yet.

Due to anomalous gravity structure ,we can recognize half-graben structure in these areas.

So seismic reflection survey crossing the bottom of the half-graben in Tsukuba and Kasama should be conducted as soon as possible.

In Chichibu and Itsukaichi,we can see the tuff derived from volcanic ashes and lime stone from coral reef.

These areas are made of accretionary complexes of submarine volcano. This shows that other areas can be accretionary of submarine volcano. In fact, in wells in Tsukuba gabbro and basalt are found.

Furthermore,we can see the minus anomalous magnetic zone in Moriya ,Tskuba,Kasama,Gozenyama,

Nantaisan. Central ridge has the same peculiarity. Tsukuba and Kasama may be submarine volcano on the ridge that had collided. In Nantaisan, Icelandaite rock has been found. Needless to say ,Iceland is an island on the central ridge.

With this point of view, we need to analyze rocks in these areas in detail.

2. At depth of 30 km ,Chichibu and Kawagoe area have no high velocities area,but Tsukuba and Hokota area have large high velocities areas.The distance between the center of two ellipses in Saitama prefecture and Ibaragi prefecture is both about 44 km.With these informations, I formed a pythothesis that Chichibu area was on top of Tsukuba area and Kawagoe area was on top of Hokota area. The analysis of cordierite and sillimanite (Tagiri,Miyazaki) showed that Tsukuba was at depth of 15 km,Mt. Tsukuba 10km,Mt.Wagakuni 5km.So far, over these areas have been considered weathered away and disappeared.

I think it unreasonable that there are the differences of weathering in these areas and weathering is no less than 15km thick .According to the cross section of seismic tomography (Nakajima),in Chichibu and Kawagoe , high velocities areas are 15 km thick.And granite conglomerates which are as old as those of Tsukuba have been found in Chichibu. . There is not large granite rock in Chichibu but in Tsukuba. So it is possible that the south part of Ibaragi prefecture (Tsukuba and Hokota areas) was under the part of Saitama prefecture (Chichibu and Kawagoe areas) and slipped out,and then moved to about 100 km east the Miocence epoch.

