Analyses on crutal deformation using Geonet data (2) - Southwestern Japan -

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We investigated crustal deformation in southwestern Japan using Geonet data. Following is the summary of the analyses.

1. Large westward movement is observed in the southern parts of the Kii Peninsula and the Shikoku Island. It seems that the movement in the southwestern part of the Shikoku Island was large in 2000 and it was retarded in the northeastern part in 2001.

Large displacement to the north is also observed in the southern part of the Shikoku Island. The pattern has been stable through the period from 1997, and the deviation in each year from the average one is small.

The maximum shear strain has been large in the northwestern part of the Shikoku Island, especially in the periods from 1997 through 1998 and from 1999 through 2000.

Noticeable clockwise rotation is observed in the eastern part of the Shikoku Island and anti-clockwise rotation is observed in the western part.

2. Effect of the fault motion of the 2000 western Tottori Prefecture earthquake to the crustal deformation in the Chugoku district was remarkable. Before that event, the crustal deformation in the district had been rather stable without any conspicuous deviation from the average one.

Eastward motion (compared to the Ogata station in the Niigata Prefecture) is observed in the whole district.

3. In the Kyushu district, especially in the southern part, large eastward motion (compared to the Ogata station in the Niigata Prefecture) has been observed through the period from 1997. Southward motion is also large in the southern part. Owing to the feature of the displacement fields, large anti-clockwise rotation is observed in the coastal region of the Sea of Hyuga. Incidentally the pattern that the Kyushu Island is opening at the Beppu-Shimabara tectonic belt, which was suggested before, is not clear.