

The making of animations of geological phenomena in JAPAN using global geological data.

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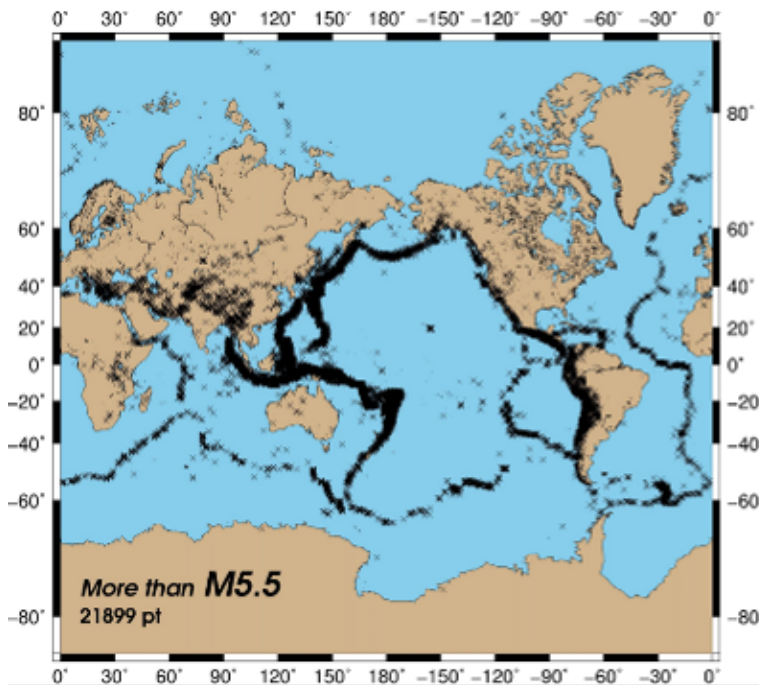
1. Moegino Junior High School

After the 2011.3.11 earthquake in Tohoku, crustal deformation by earthquakes and volcanic activity is being observed every day at Japan. Japanese people realize that they do not know much about how crustal deformation in Japan is continuously occurring, as well as how to prepare for huge earthquakes. One of the reasons for this problem is the fact that crustal deformations in Japan are not taught properly in Junior High Schools. If these things were properly taught, the preparation for huge earthquakes would be much easier to do in the near future.

In this study, we created 3D animations for Japanese crustal deformation using GNSS data obtained by the Geographical Survey Institute of Japan (GSI), and from animations that show the distribution of earthquakes around the world using earthquake catalog data obtained by the United States Geological Survey (USGS). Overall, this would make it easier for school children to understand the Japanese crustal motions and how earthquake work in global distribution. The GSI had already created a 3D animation of Japan, but only for a limited time and area. The utility of that animation was suggested, under KATO (2011), to be applied again to current studies. The newly created animations will help to understand the detailed crustal deformation in Japan and the regularity of earthquakes in the world.

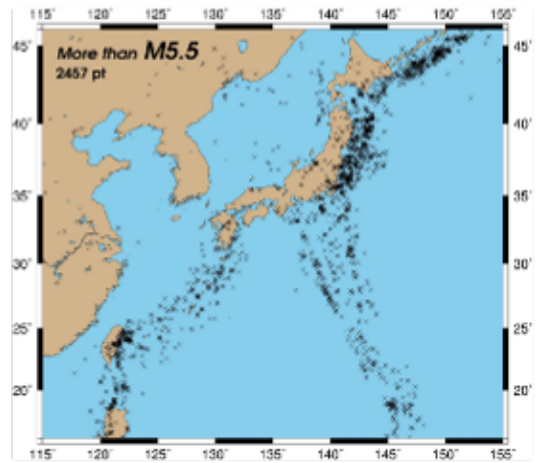
Using these animations in Junior High School education, we hope to change people's attitude toward nature, especially in relation to big earthquakes and the loss of lives, like in the 2011.3.11 Tohoku earthquake and Kumamoto earthquake, etc.

Keywords: GNSS, JAPAN, crustal deformation, GEONET, epicenter



Epicenter map

Earthquake catalog by USGS



Crustal deformation map

GNSS data by GSI

