Open data action to publish the GNSS-A seafloor geodetic data

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Seafloor geodetic data are particularly important for monitoring the behavior of undersea inter-plate boundary regions. Since the mid-1990s, Japan Coast Guard have been developing the combined Global Navigation Satellite System-Acoustic ranging (GNSS-A) technique for realizing seafloor geodesy. This technique allows us to collect time series of seafloor crustal deformation. The datasets of time series can be used to investigate several seismological phenomena along the subduction zones around Japan, such as the Nankai Trough and Japan Trench. These regions are globally important places in geodesy and seismology and are also suitable for comparison with other geophysical datasets. Therefore, sharing the datasets in an appropriate way, it is expected to promote further understanding of megathrust zones.

First, we published our datasets on our web site (https://www1.kaiho.mlit.go.jp/KOHO/chikaku/kaitei/sgs/datalist_e.html). However, this is not an appropriate way because the description of the datasets in not sufficient for other researches to use. In addition, our site has not a function to mint DOIs for datasets. To solve this problem, we published our datasets as data paper (Yokota et al. 2018). Data paper is a peer-reviewed paper for descriptions of datasets that advances reuse of the data. Our intention is for data paper to widely share the GNSS-A datasets to promote further advances of seismology and geodesy.

Reference:

Yokota, Y., T. Ishikawa and S. Watanabe (2018): Seafloor crustal deformation data along the subduction zones around Japan obtained by GNSS-A observations, Scientific Data, 5:180182, doi:10.1038/sdata.2018.182.

Keywords: open data, data journal, seafloor geodesy