

## Issues and progress of Open Science in geodesy

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In the global geodesy field, the data, operating organizations, motivations, and international governing bodies are diverse. For example, RINEX files are MB order, but raw data of VLBI reaches the TB order which makes them difficult to save and distribute. Some implementations of SLR are for map creation, and others are for space exploration. How to manage and maintain a huge amount of data from such observation networks with different properties is a common issue in the current geodesy.

In order to solve these universal problems in the geodesy, it has been considered to advance the Open Science. GGOS Japan (in the Geodetic Society of Japan) and GGOS established working groups about the Data DOI in 2019 to discuss the assignment of DOIs to data with the aim of proper distribution of these diverse data, objective evaluation and permanent management of the data. These working groups are discussing the future handling of geodetic data by large institutes. It is a universal issue in the geodetic field that the problem of data being time-series and that data and services (processed data) exist differently. Also, having data across institutions is a barrier to smooth execution of Open Science.

Data paper publications by the data manager / observer will be important. Currently, we are conducting pilot experiments in the field of seafloor geodesy.

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