

## SERCE Data Acquisition



### **Statement on Antarctic geodetic infrastructure**

SERCE urges national agencies to expand and maintain existing geodetic infrastructure across Antarctica. The long-term deployment of geodetic infrastructure across Antarctica is required to measure three-dimensional Earth deformation and gravity fields. Datasets with high spatial resolution from sites operating continuously is especially critical in regions of low mantle viscosity and ongoing ice loading changes (e.g. West Antarctica and Antarctic Peninsula).

### **Statement on Antarctic seismic infrastructure**

SERCE urges national agencies to support the spatially extensive and regionally targeted deployment of broadband seismometers across Antarctica. Spatially widespread observations are required to determine mantle and crustal properties, including rheology and geothermal heatflux.

### **Statement on data provision**

SERCE strongly encourages the open and freely available provision of datasets relevant to its aims, notably seismic data relevant to sensing the interior properties of the solid Earth and geodetic data allowing measurements of solid Earth deformation or gravity field change. Where such datasets are not provided immediately upon collection we urge data collection agencies to provide metadata in an open repository. Example data and metadata repositories include the SCAR GNSS database (<https://data1.geo.tu-dresden.de/scar/index.shtml>), UNAVCO ([www.unavco.org](http://www.unavco.org)) and IRIS PASSCAL (<http://www.passcal.nmt.edu>).

### **Statements on geothermal heat flow**

SERCE recommends scientists support the measurement of thermal gradients and conductivities in crystalline bedrock and sediments.

SERCE recommends scientists derive and make available radiogenic heat production rates for Antarctic archive rock samples and outcropping lithologies.