



NORDISKA KOMMISSIONEN FÖR GEODESI
NORDIC GEODETIC COMMISSION

ABSOLUTE GRAVITY DATA SHARING CODE OF CONDUCT

1 Institutions

This code of conduct has been agreed upon by the Nordic institutions collecting absolute gravity (AG) observations within the cooperation of the Nordic Geodetic Commission (NKG), hereafter called the Institutions.

2 Background and scope

Within the Nordic cooperation of the NKG, AG observations have been carried out in the Fennoscandian area by different institutions for more than 30 years. A considerable amount of AG observations have been collected, and a continuation of the observation efforts is foreseen.

Some principles regarding the data exchange are recognized:

- AG observations require considerable human as well as financial resources, thus they are valuable and their collection is vulnerable.
- The amount of observations, observation frequency as well as their time span varies between the Institutions.
- The geodetic authorities within the NKG expect scientific as well as useful practical results from the invested observations and their facilities.
- The value of the observations increases if they are pooled for scientific research purposes.

The basic purposes of the code of conduct are:

1. To ensure that a complete set of AG observations is available for scientific work among the Institutions, which in turn is considered advantageous for society (science purpose).
2. To ensure that these AG observations are preserved for the future (backup purpose).

The code of conduct covers the exchange of AG data, a central archive for these shared data, and conditions for use of the shared data. It is also the intention of the Institutions to cooperate within scientific research based on the shared data and present results in joint publications, although the use of the data is not restricted to joint work.

3 Objectives

The Institutions will share AG observation data contributing to regional studies in the Fennoscandian area, primarily to the understanding and modeling of Glacial Isostatic Adjustment, to the extent permitted by other agreements concerning data rights. Observations of the local vertical gravity gradient at the AG stations and other ancillary parameters relevant to AG are also covered by the code of conduct.

Each Institution will decide which observations and/or stations fulfill the objectives of the code of conduct.

At present, the Swedish mapping, cadastral and land registration authority (Lantmäteriet, LM) will arrange and manage an archive for storing the data. This archive will be managed with a reasonable level of security regarding backup etc., commonly applicable to this kind of data. If LM is not longer able to maintain the archive, the Institutions should agree to move the archive to one of the other Institutions.

Each Institution is however still responsible for their own AG data, and are expected to subject their data to a suitable backup scheme.

As for the backup purpose, the format of the data is expected to be collected “raw” data, i.e., the data files required for transfer/archiving purposes. This will depend on the instrument type, which may be any instrument capable of measuring absolute gravity.

In case of ballistic AG meters of FG5 type, the “g” software binary project (.fg5) and *all set* (.gdf) files are necessary.

As for the science purpose, the format of the data is expected to be a simply formatted ASCII file containing a re-processed and ready-to-use AG value with necessary ancillary data. An example of such a file is given below:

```

% Absolute gravity observations in Norway
% The observations have been reprocessed with the g9 software, using
% standard corrections, calibrated Rb frequency value closest in time
% to observation epoch and final IERS polar coordinates. FES2004 OTL
% model used at all sites except KAUT and TRYB/TRYC where no OTL
% correction is applied.
%
% Column IDs
% 1: site.code
% 2: latitude (deg)
% 3: longitude (deg)
% 4: physical height (m)
% 5: epoch (yr)
% 6: inst
% 7: g (uGal)
% 8: tot.uncert. (uGal)
% 9: set.scatter (uGal)
% 10: #drops
% 11: #refheight (cm)
% 12: vgg (uGal/cm)
% 13: vgg.uncert (uGal/cm)
% 14: reproc.epoch (yr)
%
STVA 59.0180 5.5990 55.0 1993.679 FG5#102 981832863.13 2.41 2.70 8062 ...
    120 -2.86 0.08 2015.695

```

4 Responsibilities

Each Institution is responsible to the other Institutions for the quality and availability of the data. It is acknowledged that the availability of human and financial resources to prepare the data exchange outlined in the code of conduct may vary in time as well as between the Institutions. Still, the data exchange is expected to take place within reasonable time following observation, i.e., within a few years. LM maintains a list of contacts responsible for the data exchange. It is the responsibility of each Institution to keep their contact information up to date.

The Institutions agree not to forward or otherwise make shared data available to a third party, unless agreed between the Institutions. However, each Institution has full right to their own observations, and may use them in any cooperation or make them publically available.

5 Research

Each Institution is free and encouraged to carry out research based on the shared data. Section 6 regulates publication of this research. Scientific cooperation between the Institutions making use of the shared data is particularly encouraged.

6 Publications

Each Institution is free and encouraged to publish presentations and papers based on their own data.

Details regarding publications based on shared data should be worked out through negotiations between the Institutions. Such negotiations should recognize the following principles:

- Joint publications based on shared data are facilitated and encouraged.
- Joint publications should not be delayed (for more than a few years) due to the inability of one Institution to prepare and publish a paper based solely on their data.
- When joint publications have covered the coordinated observations and joint research to an acceptable degree, the results from specific research based on the shared data may be published by any subgroup of the Institutions. Institutions not covered in the list of authors should in this case be acknowledged in the publication for their observation efforts.

7 Liability

The Institutions are not liable to each other or any third Institutions for any claims, losses or damages rising from data use.

8 Duration

This code of conduct was approved by the NKG Presidium at the 89th meeting on November 25–26, 2025, in Espoo, Finland, upon which it is effective.