

6th European MagNetE Workshop Prague, 3-5 June, 2013

Summary and Conclusions

The 6th European Repeat Station (MagNetE) Workshop was co-organized by the EPOS Working Group 9 on Magnetic Observations and was hosted by the Institute of Geophysics of the ASCR, in Prague, Czech Republic, on 3-5 June, 2013. 28 participants from 15 countries attended the workshop.

The workshop lasted 2 days only instead of 3 days as originally planned. The reason was the heavy flood situation in the West of the Czech Republic, which did not allow a visit to the Budkov Geomagnetic Observatory in a one day excursion.

The workshop consisted of 4 oral sessions and a poster session.

Presentations

In numerous poster presentations it was reported on the recent repeat station surveys carried out in European countries, on national station networks, survey results, analyses and modeling of the geomagnetic field.

In oral presentations the objectives and the work programme of MagNetE was outlined as a basis for further discussions. The role of the WDC for Geomagnetism in Edinburgh and its efficiency in acquiring and distributing magnetic repeat station data was demonstrated as well. Interesting aspects regarding the operation of geomagnetic observatories and securing long term data series, studies of sources of the magnetic disturbance field, on external field influences on repeat station data, balloon geomagnetic measurements, and a report about a “Sparkling Geomagnetic Field” educational project were also presented.

Invited presentations on SWARM and EPOS

Of particular interest for future geomagnetic research, there were 2 invited presentations on the agenda: one entitled “Swarm mission – a new step in understanding the magnetic field”, given by Mioara Manda, and “European Plate Observing System EPOS and Geomagnetic Observations”, presented by Pavel Hejda.

Many technical details of the upcoming Swarm mission, ESA’s first magnetic satellite constellation project consisting of three satellites, were introduced. The importance of the satellite data for geomagnetic research was stressed, in particular for analyses in context with ground-based geomagnetic survey data.

EPOS-The European Plate Observing System, is a long-term integration plan of national Research Infrastructures. Its goals and architecture were well outlined in the presentation. In addition, a paper for information was distributed during the workshop, describing in detail the EPOS Thematic Core Services – WG9. WG9 comprises the field of Magnetic Observations, and is therefore open for a cooperation with MagNetE (The Group for European Repeat Station Surveys). Possible contributions of primary data and future thematic services were extensively discussed by the workshop participants.

Discussion of future RS survey practices

In the discussion on future repeat station surveys in Europe it becomes evident that the survey strategies should take advantage of several important scientific results that were reported during the past MagNetE workshops, and survey concepts can be adjusted accordingly. This applies to questions of station density, survey intervals, of measurement and data processing procedures, data accuracy (see e.g. paper of M. Korte, “Repeat station biases and external field residuals”) and others. But it also turns out in the discussion that in European states magnetic data are utilized for very different theoretical and practical applications, which require very different survey strategies.

Interface RS-ENTER

Since the Interface for the conversion of repeat station measurement results in MagNetE data files (in the special MagNetE format) has turned out useful, it was decided to make the programme better available via the internet. Gerald Duma will provide an improved programme version.

MagNetE publication

On occasion of the 5th MagNetE workshop in Rome 2011, the INGV offered the MagNetE group to publish a Special Issue with papers of workshop participants in the renowned Journal *Annals of Geophysics* (AoG). This Special Issue appeared in 2012, Vol 55, No 6; www.annalsofgeophysics.eu / Archives. It contains 12 papers with many authors of the MagNetE community involved. The papers cover excellently numerous important aspects of geomagnetic surveying and instruments. Many thanks to the authors and to the Editorial Team of AoG, in particular to Dr. Anna Gracia Chiodetti and Paola de Michelis.

Magnetic charts of Europe

It was discussed whether the “Geomagnetic chart of Europe for Declination 2006”, produced by MagNetE, should be updated for a new epoch, where a sufficient number of survey data in whole Europe is available. Eventually, similar maps for a different magnetic component, e.g. for total intensity F, can be produced, too. No decision about this plan was made in the meeting.

MagNetE website

Monika Korte, Deutsches GeoForschungsZentrum GFZ, still maintains the MagNetE website <http://www.gfz-potsdam.de/portal/gfz/home> (Find: MagNetE). There, access to all workshop websites since 2003 is provided, which contain the Circulars, Programs, List of participants, Abstracts etc. of each workshop.

Next MagNetE meeting

Roman Leonhardt, Central Institute for Meteorology and Geodynamics, Vienna, kindly offered to organize the next MagNetE workshop. By consultation with Peter Kovács, Geological and Geophysical Institute of Hungary, Budapest, it is yet to be decided whether the 7th workshop will be held in Austria or in Hungary. Place and date of the workshop will be announced in due time.

MagNetE Committee

No new MagNetE Committee was elected.

From the Committee elected 2011, Isabel Socias proposed that Jesus Fernandez, from Instituto Geografico Nacional, Madrid, will replace her as the national representative in the MagNetE group.

The Committee, elected in 2011, therefore in its present form consists of:

Guido Dominici

Tom Shanahan

Jesus Fernandez

Barbara Leichter

Pavel Hejda