XXth EUREF Symposium in Gävle Sweden

June 2 – 5, 2010

Report by Mikael Lilje, Manager Geodesy Division, Lantmäteriet

The IAG Reference Frame Sub-commission for Europe (EUREF) held its 20th Symposium from June 02-05, 2010 in Gävle, Sweden. The symposium was arranged by Lantmäteriet (the Swedish mapping, cadastral and land registration authority) and co-sponsored by KTH Royal Institute of Technology and Onsala Space Observatory at Chalmers University of Technology. The EUREF Technical Working Group (TWG) met the day before the beginning of the symposium. About 130 geodesists representing 29 countries participated in the symposium. About 41 oral presentations and 29 National Reports as well as 20 posters were presented covering various aspects of EUREF and neighbouring topics.



EUREF is the IAG Reference Frame Sub-commission for Europe. The long-term objective of EUREF, as defined in its Terms of Reference, "is the definition, realization and maintenance of the European Reference Systems, in close cooperation with the pertinent IAG components (Services, Commissions, and Inter-Commission projects) as well as EuroGeographics". The results and recommendations proceeding from EUREF support the use of the European Reference Systems in all scientific and practical activities related to precise geo-referencing and navigation, earth sciences research and multi-disciplinary applications. EUREF makes use of the most accurate and reliable terrestrial and space-borne techniques available, and develops the necessary scientific background and methodology.

The scientific programme covered the following topics:

- Activities of the EUREF Technical Working Group
- New Developments in GNSS Networks
- Modelling the Earth with GNSS
- Mitigation of GNSS Error Sources
- Height, Gravity, Geoid, and Combination of Techniques

- Improvements and Densifications of the ETRS89
- National Reports

A "Best Student Poster Award" was awarded to a young scientist. The winner this year was Olga Bjelotomic, University of Zagreb, Zagreb/Croatia, for the submission of a poster together with D. Markovinivic and T. Basic, entitled 'Detection of the Multipath Effect in the ING2 GPS station with a new developed software'.

A detailed overview on this symposium (programme, participants, ppt-files of presentations, photo gallery etc.) will be uploaded to the EUREF web homepage. Note, previous symposia are also documented at this location - <u>http://www.euref.eu/</u>

By courtesy of the colleagues of the Republic of Moldova, the EUREF Sub-commission is invited to hold its 2011 Symposium in Chisinau, Republic of Moldova from May 25-28, 2011.

The following resolutions were adopted at the symposium:

Resolution no. 1

The IAG Reference Frame Sub-commission for Europe (EUREF)

Recognising that GNSS campaigns and subsequent computations were completed and presented to the Technical Working Group (TWG) as

1. EUREF Czech 2009;

2. EUREF EIR/UK 2009; and

3. EUREF GR 2007;

by representatives of the Observing Nations and these results were accepted as Class B standard by the TWG

Endorses the set of points for 1) Czech Republic, 2) Republic of Ireland and the UK and 3) Greece, as submitted to the TWG as an improvement and extension of ETRS89.

Resolution no. 2

The IAG Reference Frame Sub-commission for Europe (EUREF)

Considering the TWG recommendation of adopting the ETRF2000 as a conventional terrestrial reference frame of the realisation of ETRS89

Noting the great benefit of harmonising the ETRS89 realisations at the national level of the European countries and consequently minimizing possible discrepancies in geo-referencing applications through Europe

Recommends that the NMCAs adopt the ETRF2000 as the basis for future national implementations of ETRS89

Resolution no. 3

The IAG Reference Frame Sub-commission for Europe (EUREF)

Noting the leading role that EUREF has taken using and developing the use of GNSS together with the advantages that such leadership has given Science, IAG, EU and NMCAs;

Recognising the GNSS modernisation programmes in particular the European Galileo;

Encourages members of EUREF to provide the necessary infrastructure, data and analysis from these new GNSS developments:

Requests the TWG to establish a platform for the exchange of experiences in upgrading the EPN.

Resolution no. 4

The IAG Reference Frame Sub-commission for Europe (EUREF)

Noting that the European contribution to the IAG WG on Regional Dense Velocity Fields is coordinated by EUREF

Considering that there are permanent tracking stations, not included in the EPN, but are of scientific importance

Encourages analysis of the data following the guidelines for EUREF densifications and transmission of weekly SINEX solutions to EUREF

Resolution no. 5

The IAG Reference Frame Sub-commission for Europe (EUREF) which held its twentieth symposium in Gävle from June 2 - 5, 2010 Expresses its sincere thanks to the Lantmäteriet and the Local Organising Committee Mikael Lilje, Lars E Engberg, Christina Kempe, Martin Lidberg, Bo Jonsson, Peter Wiklund, Jan Johansson (Chalmers) and Lars Sjoberg (KTH) for organising the symposium and for the excellent arrangements resulting in a very successful meeting and for the support given by the sponsors Future Position X, Leica Geosystems and SP Technical Research Institute of Sweden AB.