

National Report of Portugal

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1. Introduction

The present report covers the activities of the Portuguese Geographic Institute, IGP, concerning the EUREF work, during the last twelve months. The following items will be focused: National Permanent GPS Stations Network (ReNEP-GPS), National Geodetic Network (RGN) and First Order Levelling Network (RNGAP).

Since last Euref Symposium, we had some changes in our Institute, started with a new name (from IPCC to IGC), a new orientation of the departments and a new Direction.

All this changes took some months, during that time our campaigns were reduced to the minimum.

2. National Permanent GPS Stations Network (ReNEP-GPS)

The GPS reference stations Mirandela and Beja started operating.

PDEL station became an IGS station. We changed the elevation cut off angle of our EUREF stations to 5 degrees.

We are expecting to have the GPS Reference Station of Madeira fully operational in July.

The equipment for the Melriça GPS station (in centre of Portugal) is acquire, we are expecting that the building where it will be installed (a Geodetic Museum) will be ready.

For 2003 we hope to establish a new GPS station in Azores, Central Group. All the already established stations are connected to the National Geodetic Network (RGN).

3. Gravimetric Geoid Model for Portugal mainland

An independent new geoid model was developed, using all the gravimetric information available, for Portugal mainland. This was a joint project between IPCC, FCUL and the Instituto de Astronomía y Geodesia, Facultad de Mate-

máticas, Universidad Complutense of Madrid. This model was first presented at the 3th Hispano-Portuguese Conference, held last February at Valencia, Spain.

4. National Geodetic Network (RGN)

In 2001 we continued the 2nd order network observation. We observed about 20 % of the total network. Actually we have 40% of the network observed and processed.

The following standards are used to observe the 2nd order network:

- 4-5 double frequency Trimble GPS receivers
- 2 h session
- 15 s epoch interval
- elevation mask 10°
- occupation of two first order points in each session.

The preliminary computation shows results (for ITRF96) better than 5 centimetres (at 95% of confidence level) for the coordinates.

5. Reconnaissance and Rebuilding of the National Geodetic Network

During the last period more 400 Geodetic Points have been logged and rebuild. This work took place in the Southern part of Portugal mainland.

6. First Order Levelling Network (RNGAP)

In 2001, the observation of the first order levelling network has reached 80 km in mainland.

References

- PINTO J. 2001: *National Report of Portugal*, Proceedings of the EUREF Symposium held in Dubrovnick, Croatia, 16 – 19 May.

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