National Report of Latvia

EUREF 2008 - Session 6
Brussels, 18 - 21 June, 2008

J. Kaminskis, Department of Geodesy
Latvian Geospatial Information Agency, Latvia
E-mail: janis.kaminskis@lgia.gov.lv
Outline:

• GPS observations and GPS reference system – LatPOS;
• National height network - levelling;
• Gravimetric measurements;
• Plans for the next years.
LatPOS, network of base stations of Global Positioning System (GPS)

• Established Year 2005;
• 19 Leica GPS base stations are maintained;
• Control and computation center in Riga;
• Average distance between stations 70 km;
• Maximal baseline outside network is 76 km;
• Corrections: RTK, DGPS, post processing data;
• 139 RTK users, Post processing : 344 users.
Network of base stations

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National height network – levelling

• Levelling works are carried out by one self-dependent team of LGIA;
• Levelling works are carried out in the period from May until November;
• In levelling, level DiNi12 is used;
• In this year, probably we will complete field works of levelling of the first order, and the planned total length of lines 3000 km will be reached;
• It is possible to reach the planned volume only then, if the second levelling brigade is engaged;
• We will start attachment of levelling networks to Lithuania (in 3 sites) and to Estonia (in 4 sites), it will be continued in 2009.
TOTAL 2626 km

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Variations of heights in Western part of Latvia [mm]
Gravimetric measurements;

• Gravimetric measurements is carried out by one observer
• We are using gravimeter CG-5;
• We have 2 new gravimeters CG-5 at our disposal;
• We carry out regular gravimetric measurements also in our absolute gravimetric point in Rīga, in the territory of the Botanic Garden;
• We intend to continue joint gravimetric measurements with Estonian and Danish colleagues.
“OLD” GEOID LV’98 – STILL IN OPERATION

LATVIA geoid, Fitted to 130 GPS/levelling points, c.i. 0.5 m

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Plans for the next years:

• To participate in GPS campaign of 2008 arranged by Nordic Countries - NKG (end of September);
• To continue repeated and more precise determination of coordinates of triangulation points by GPS;
• To complete repeated precise levelling of the state;
• To continue other geodetic field and cameral works;
• To engage in fundamental scientific European projects;
• To improve accessibility of geodetic information according to present possibilities and requirements;
• To participate and organize international conferences, as for example W. Struve conference in Jēkabpils, in Latvia from 22nd August until 23rd August, 2008.
Thank you for attention!