EGU, Vienna, Thursday May 6 2010
David Crossley, Corinna Kroner & Jacques Hinderer
1. **Station review – local (Europe) - other (Crossley)**
2. **Status of ICET data**
3. **Status of Chile earthquake data**
4. **ICET database (Barriot)**
5. **Database support from GFZ (Ritschel)**
6. **New proposal for GGP data treatment (Palinkas)**
7. **Improving data distribution models**
8. **Other Issues**
   a) **GGP as IAG service (GGOS)**
   b) **AGRAV database**
   c) **Instrument calibration (scale) factors and history**
9. **Small Issues:**
   a) **BIM back issues on website**
   b) **New maps and decimation filters on GGP website**
10. **Next meeting – 2\textsuperscript{nd} Asian SG Workshop – Taipei June 20-22**
   1. **2\textsuperscript{nd} General Assembly IGFS Fairbanks September 20-22 (abstracts June 1\textsuperscript{st})**
Cibinong, Indonesia - Nov 2008
LLR telescope, aiming for 1 mm precision in lunar distance
Sutherland South Africa
Sutherland South Africa
Wettzell (Geodetic Observatory):

- Establishment of a new VLBI Twin Radio Telescope, one of which placed near to the Gravimeter House (distance ~25m)
- Construction of a new Gravimeter House to ensure undisturbed gravity observation
- SG030 planned to be moved to new building in Wettzell, parallel observation with SG029 at old site

- Hydrological investigations in cooperation with GFZ Potsdam (Güntner, Creutzfeldt)
- Parallel observation at both points intended to verify the local hydrological models
Station Wettzell

New Gravimeter House

New VLBI TWIN Telescopes

Old Gravimeter House
New Gravimeter Building in Wettzell

- Separate rooms for AG and SG
- 4 AG pillars
- Groundwater well next to building
- Continuation of hydrology experiment in cooperation with GFZ:
  - TDR-cluster in vicinity
  - Soil moisture sensors installed around SG pier (inside foundation)
- Absolute comparison planned: AG groups are invited to participate
Medicina (Italy):

- **SG023**: Registration continued, uninterrupted time series since 1997
Concepcion (Chile), **SG038:**

- SG038 re-installed in Dec. 18, 2009 after cooling system upgrade
- Feb 27, 2010 **earthquake** magn. 8.8
- SG tilted, UPS and solar panels kept the SG alive
- Registration continued after sensor re-centering
- AG was dropped to ground
- AG reference measurements in Concepcion, April / May 2010
Station Concepcion

AG reference measurements in Chile, 28 April, 2010
SG038, FG5-227, FG5-101

TIGO gravity building

AG reference measurements in Chile, 28 April, 2010
SG038, FG5-227, FG5-101
Residual curves for Bad Homburg, Wettzell and MC:
• remarkable similarity of seasonal patterns for MC and BH,
• significantly larger annual and inter-annual variations at station WE.
Absolute Gravity Database AGrav

- Official IAG database at BGI for AG data
- Mirrored servers at BKG (Germany) and BGI (France)
- Map based web-interface to access meta-data and/or processing results
- More than 400 stations (Apr. 2010)
- More than 1300 observations (Apr. 2010)
- Two “views” to data:
  - meta-data: free access
  - complete data: restricted to contributing groups

http://agrav.bkg.bund.de
Absolute Gravity Database AGrav

http://agrav.bkg.bund.de

- Cooperation with GGP foreseen
  - for SG drift determination and SG calibration
  - to determine AG/SG-combined gravity signals
- Database provides the capability to store also AG set results and detailed AG drop data
Submission Status for BKG Stations

- Delay in data submission caused by changes in electronics and registration system:
  \[ \rightarrow \] GWR-Registration; GGP-Filter resulting changes in calibration parameters;
- Wettzell and Bad Homburg up to date now!

<table>
<thead>
<tr>
<th></th>
<th>Raw data</th>
<th>Corrected 1</th>
<th>Corrected 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minutes</td>
<td>Minutes</td>
<td>Minutes</td>
</tr>
<tr>
<td>GGP-00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGP-01</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GGP-02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOG</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUX</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Station</th>
<th>Date</th>
<th>Date</th>
<th>Date</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wettzell</td>
<td>9811-1003</td>
<td></td>
<td>0103-1002</td>
<td></td>
</tr>
<tr>
<td></td>
<td>9811-1003</td>
<td></td>
<td>0103-1002</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9810-0909</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bad Homburg</td>
<td>0102-0704</td>
<td>0102-0604</td>
<td>0102-0706</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0102-0704</td>
<td>0102-0604</td>
<td>0102-0706</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0402-1001</td>
<td></td>
</tr>
<tr>
<td>SG44</td>
<td>0702-1003</td>
<td></td>
<td>0702-0908</td>
<td></td>
</tr>
<tr>
<td>Medicina</td>
<td>9801-0312</td>
<td>9801-0903</td>
<td>9801-1002</td>
<td>9801-0909</td>
</tr>
<tr>
<td></td>
<td>0605-1003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concepcion</td>
<td>0212-0806</td>
<td>0212-0505</td>
<td>0301-0806</td>
<td>0212-0806</td>
</tr>
</tbody>
</table>
Stations up to date:
Strasbourg, Wettzell, Bad Homburg, Moxa, Medicina, Cantley, Pecny, Membach, Metsahovi

Stations behind a little:
Wuhan, Sutherland, Tigo Concepcion, Hsinchu, Conrad

Stations behind a lot:
Esashi, Canberra, Ny Alesund, Kamioka, Syowa

Stations with no data:
MunGyung, Walferdange, Ghutlu, Gujarat, Cibinong

Stations just started:
Onsala, Schiltach (BFO), Lhasa
<table>
<thead>
<tr>
<th>Station Name</th>
<th>Id</th>
<th>Months</th>
<th>Status/Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onsala, Sweden</td>
<td>OS</td>
<td>Feb, March</td>
<td>Hans-Georg Scherneck (<a href="mailto:hans-georg.scherneck@chalmers.se">hans-georg.scherneck@chalmers.se</a>)</td>
</tr>
<tr>
<td>Texas</td>
<td>TX</td>
<td>In prep</td>
<td>(crossley - from C. Wilson)</td>
</tr>
<tr>
<td>Apache Point, USA</td>
<td>AP</td>
<td>Feb, March</td>
<td>Tom Murphy (<a href="mailto:tmurphy@physics.ucsd.edu">tmurphy@physics.ucsd.edu</a>)</td>
</tr>
<tr>
<td>Bad Homburg, Germany</td>
<td>BH*</td>
<td>Feb, March</td>
<td>2 sensors - H1, H2; separate instrument - H3 / P. Wolf (<a href="mailto:peter.wolf@bkg.bund.de">peter.wolf@bkg.bund.de</a>)</td>
</tr>
<tr>
<td>Wettzell, Germany</td>
<td>WE*</td>
<td>Feb, March</td>
<td>2 sensors W1, W2 / P. Wolf (<a href="mailto:peter.wolf@bkg.bund.de">peter.wolf@bkg.bund.de</a>)</td>
</tr>
<tr>
<td>Medicina, Italy</td>
<td>MC</td>
<td>Feb, March</td>
<td>P. Wolf (<a href="mailto:peter.wolf@bkg.bund.de">peter.wolf@bkg.bund.de</a>)</td>
</tr>
<tr>
<td>Pecny, Czech Republic</td>
<td>PE</td>
<td>Feb, March</td>
<td><a href="mailto:vojtech.palinkas@pecny.cz">vojtech.palinkas@pecny.cz</a></td>
</tr>
<tr>
<td>Strasbourg, France</td>
<td>ST</td>
<td>Feb</td>
<td><a href="mailto:hjinderer@eost.u-strasbg.fr">hjinderer@eost.u-strasbg.fr</a></td>
</tr>
<tr>
<td>Metsahovi, Finland</td>
<td>ME</td>
<td>Feb, March</td>
<td><a href="mailto:heikki.virtanen@fgi.fi">heikki.virtanen@fgi.fi</a></td>
</tr>
<tr>
<td>Conrad, Austria</td>
<td>CO</td>
<td>Feb, March</td>
<td><a href="mailto:bruno.meurers@univie.ac.at">bruno.meurers@univie.ac.at</a></td>
</tr>
<tr>
<td>Cantley, Canada</td>
<td>CA</td>
<td>Feb, March</td>
<td><a href="mailto:jacques.liard@nrcan.gc.ca">jacques.liard@nrcan.gc.ca</a></td>
</tr>
<tr>
<td>Wuhan, China</td>
<td>WU</td>
<td>Feb</td>
<td>He-ping SUN (<a href="mailto:heping@asch.whigg.ac.cn">heping@asch.whigg.ac.cn</a>)</td>
</tr>
</tbody>
</table>

We will request also April, because $S_0$ was still active!
GFZ (Bernd Ritschel)

Anything to Report?

Who is registering new stations and contacting Station Managers?

ICET (Jean-Pierre Barriot)

A prototype database interface has been shown, but not distributed

Where is 2nd BIM Issue from Jena ETC Meeting 2008?

Progress in providing corrected 1 minute data suitable for tidal analysis has been promised for the 2nd Asian SG Workshop in June

Note that Internet connection to UFP is very slow
Improving GGP Data Distribution (suggestions for discussion)

**Current Model**

Up to 6-month delay for stations to send monthly data to ICET

Up to 1 year delay for open release of GGP 1 minute data

There are major problems with data not being sent

**Improved Distribution**

Some data can be released immediately upon receipt

Can we shorten the official delay (by mutual agreement) to a maximum of 6 months before open release?
Other Topics (suggested discussion)

**GGP as an IAG Service**

No progress since IAG Meeting in Argentina – general support but where do we go from here?

Is GGP healthy enough (in terms of receiving enough data) to warrant this step?

**AGRAV Database**

What is the current status – any change of policies?

**Calibration constants (scale factors) and instrument history:**

How should we document calibration constants for each instrument?

Is the latest calibration constant (scale factor) the definitive one?

should the last one be used on all past data with that instrument?
Maps:
New maps are available on the GGP website
http://www.eas.slu.edu/GGP/ggpmaps.html

Decimation Filters
Double precision version of filters from 1s to 1 min etc. now on GGP website

BIM back issues:
Thanks to Michel Van Ruymbeke, All BIM past issues have been scanned to .pdf files


Further Business ...?