

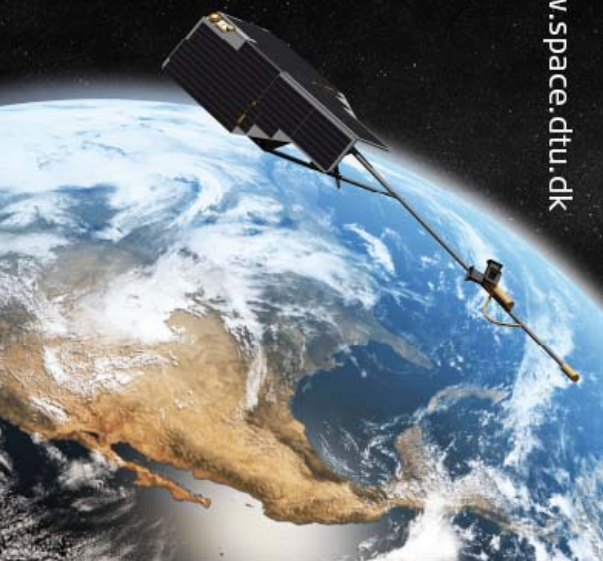
AG activities in Denmark in 2008 and plans for 2009

by

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1. AG activities in Denmark in 2008

FG-5 measurements

- IfE Hannover, Copenhagen Vestvolden (23-27 Aug 2008)
- Lantmäteriet Gävle, Tejn, Bornholm (7–10 Oct 2008)

Publication

- Timmen L., O. Gitlein, J. Müller, G. Strykowski and R. Forsberg:
Absolute Gravimetry with the Hannover Meters JILAg-3 and FG-220,
and their Deployment in a Danish-German Cooperation.
In Zeitschrift für Geodäsie, Geoinformation und Landmanagement,
3/2008, Jg. 133, 149-163, Wissner-Verlag, Augsburg, 2008., 2008



2. A10-0019: first experiences and the present status

- A10-0019 arrived to DTU Space in late July 2008
- 4-8 Aug 2008 A10 Workshop in Copenhagen

participants:

Jan Müller and Reinhardt Falk, BKG, Frankfurt, D

Przemyslaw Roguski, IGIK, Warszawa, PL

Jens Emil Nielsen, Rene Forsberg and Gabriel Strykowski,
DTU Space, Copenhagen, DK

Derek van Westrum, MicroG, USA

venue: Copenhagen University absolute gravity station
(measured with FG5-220 by Olga Gitlein, IfE in 2005)



2. A10-0019: first experiences and the present status

During the A10-course in Copenhagen we have measured at the following absolute stations (previously measured by IfE):

- Copenhagen University
- Helsingør (56°N-line)
- Copenhagen Vestvolden

At the IfE reference height of 1.20 m the difference $\Delta g = g_{\text{FG5-220}} - g_{\text{A10}}$ was:

	$g_{\text{FG5-220}}$ (μGal)	$g_{\text{A10-0019}}$ (μGal)	Δg (μGal)
Copenhagen University:			
20080805	981546300.7	981546296.2	4.5
20080805	981546300.7	981546286.0	4.7
20080806	981546300.7	981546297.2	3.5
20080807	981546300.7	981546294.8	5.9
Helsingør:			
20080808	981580073.2	981580080.2	7
Copenhagen Vestvolden:			
<u>20080808</u>	<u>981547277.8</u>	<u>981547278.4</u>	<u>-0.6</u>



2. A10-0019: first experiences and the present status



Reinhard Falk shows BKG equipment at Copenhagen A10 workshop



2. A10-0019: first experiences and the present status



First outdoor experience, Gedser GPS antenna, Sep 11, 2008,

Lesson learned: Good equipment needed (read: a tent).
There is no such thing as good weather in Denmark.



2. A10-0019: first experiences and the present status



Meeting the Swedish team on a ferry-boat from Ystad to Rønne, Oct 7, 2008



2. A10-0019: first experiences and the present status



While unpacking “Greta” and eating lunch A10-0019 measures on Tejn Rådhus absolute gravity station, Oct 7, 2008



Measuring in calm weather in front of Rønne Church (a former fundamental gravity station for Bornholm). Lesson learned: on a good day we could measure up to 3 stations per day.



2. A10-0019: first experiences and the present status



Meanwhile our Polish friends got their A10-0020. Borowa Góra observatory near Warsaw, Oct. 26, 2008.



2. A10-0019: first experiences and the present status



We were very quick to measure both indoor and outdoor.
The Polish exhibit a great skill for improvisation, Oct. 27, 2008.



2. A10-0019: first experiences and the present status



Two other outdoor points were measured
in improvised conditions, Oct. 28, 2008.
Lesson learned: The equipment is
important!





2. A10-0019: first experiences and the present status



Hallelujah! The answer to our prayers. A tent from heaven. Bought in Poland.
Can also be used as a latrine tent in Greenland. (Rene's first thought.)



2. A10-0019: first experiences and the present status



Gedser GPS antenna revisited, Feb 6 2009 with our latest cool equipment.
Problem: the laser loses power when outside!



2. A10-0019: first experiences and the present status

A10-0019: present status

The equipment will be shipped back to USA this week.
We will arrange a field trip in Colorado to make SURE
that the meter works outdoor.

Challenge: Outdoor measurements in Greenland (june 2009)

Otherwise: We are good to deploy the meter in Denmark.
The practical side of the measurements runs smoothly now.
We just cannot get a measurement because the laser power
is too low. (It changes back to normal when moved indoor.)



3. Plans for 2009 and beyond

A10-0019:

- june 2009 Greenland
- autumn 2009. Maybe: a visit to Poland, Slovakia and Hungary
- Otherwise: measuring on permanent GPS antennas in Denmark

A10-0019 in NKG context:

If the relative gravity lines were to be re-measured with A10s we need to be fully operational.

The Polish colleagues with their A10-0020 want to cooperate with us. Joint campaign in 2010?

Misc: We have in DTU Space also a CG-5 relative meter