

# EGU2009 Poster

Some results possibly for showing

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
Copenhagen_V	55.69	12.44	OG	0.2	0.6	5	1.26	0.16	-0.24	0.53
Joensuu	62.39	30.10	MBK	-1.6	0.7	8	4.50	3.31	4.06	0.19
Metsähovi	60.22	24.40	MBK	-0.5	0.2	15	5.21	4.05	4.26	0.23
Sodankylä	67.42	26.39	MBK	-1.6	0.4	15	8.53	7.29	7.12	0.31
Vaasa_AA	63.08	21.65	MBK	-2.1	0.3	19	9.28	8.09	8.62	0.19
Vaasa_AB	62.96	21.77	MBK	-1.6	0.2	14	9.28	8.09	8.62	0.19
Tromsö	69.66	18.94	HW	-0.4	0.3	11	4.61	3.35	2.30	0.49
Stavanger	59.02	5.60	HW	-0.4	0.2	12	2.19	1.05	1.18	0.51
Trysil	61.42	12.38	HW	-1.2	0.3	9				
Hönefoss_AB	60.17	10.38	HW	-1.0	0.3	9				
Hönefoss_AC	60.13	10.36	HW	-0.6	0.3	9				
Arjeplog	66.32	18.12	OG	-0.9	0.7	4	9.11	7.88	7.65	0.24
Kiruna	67.88	21.06	AE	-0.8	0.2	12	7.72	6.48	6.36	0.28
Mårtsbo	60.60	17.26	AE	-1.2	0.2	12	8.86	7.69	6.74	0.15
Onsala	57.40	11.93	AE	-0.8	0.2	14	4.05	2.93	2.66	0.31
Östersund	63.44	14.86	OG	-1.5	0.7	4	9.55	8.35	8.26	0.17
Skellefteå	64.88	21.05	AE	-1.8	0.2	15	10.95	9.74	9.61	0.18
Kramfors	62.85	18.10	OG	-1.4	0.7	4				

**4** source

**5** gravity rate  $\mu\text{gal}/\text{yr}$

**6** stde (by JM)

**7** spans years

**8** vertical rate mm/yr Martin Lidberg Ph.D. thesis ITRF2005

**9** previous transformed to ITRF2000 by JM

**10** Martin Lidberg J. Geodesy and NKG2005LU ITRF2000

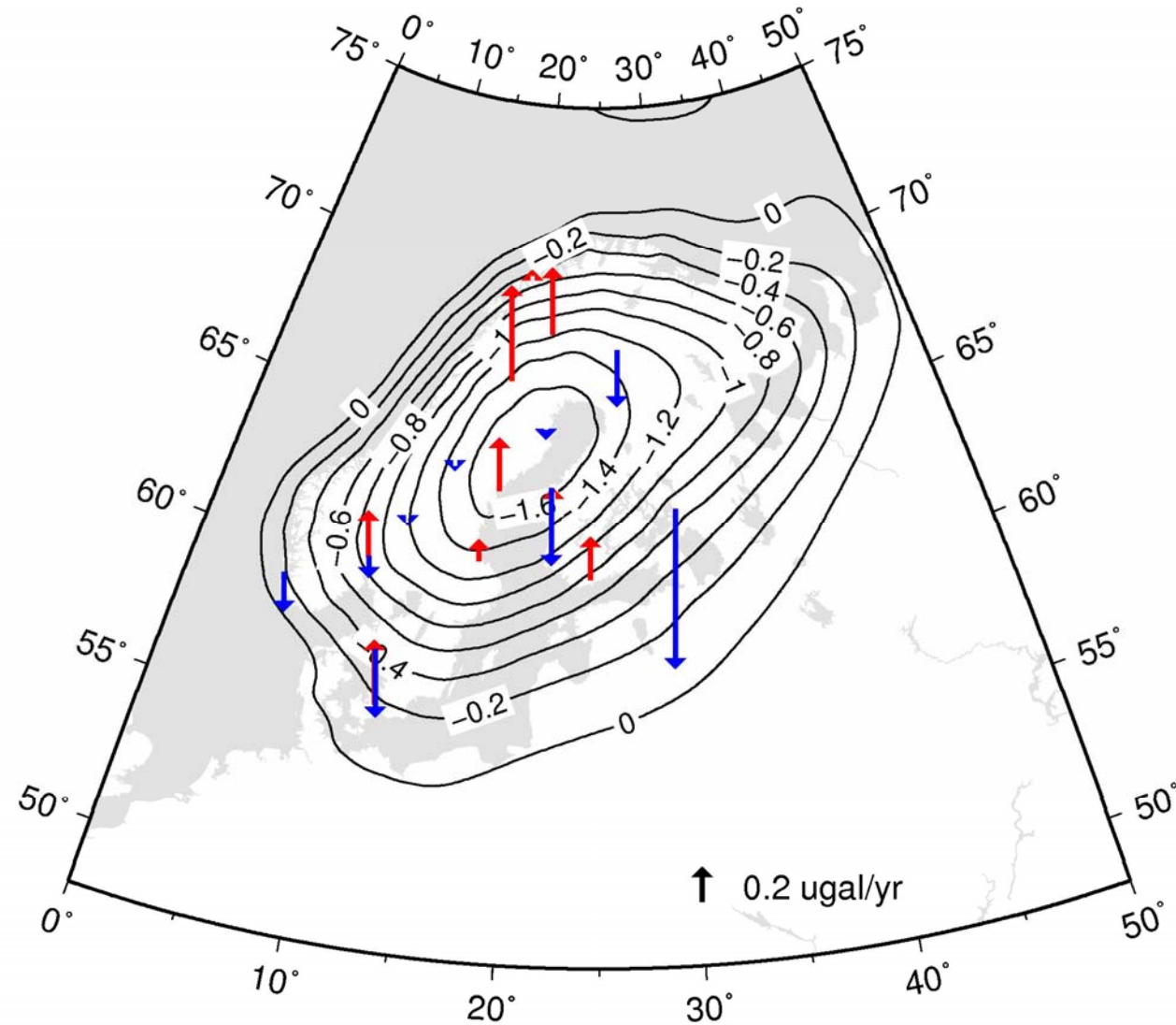
**11** stde of previous

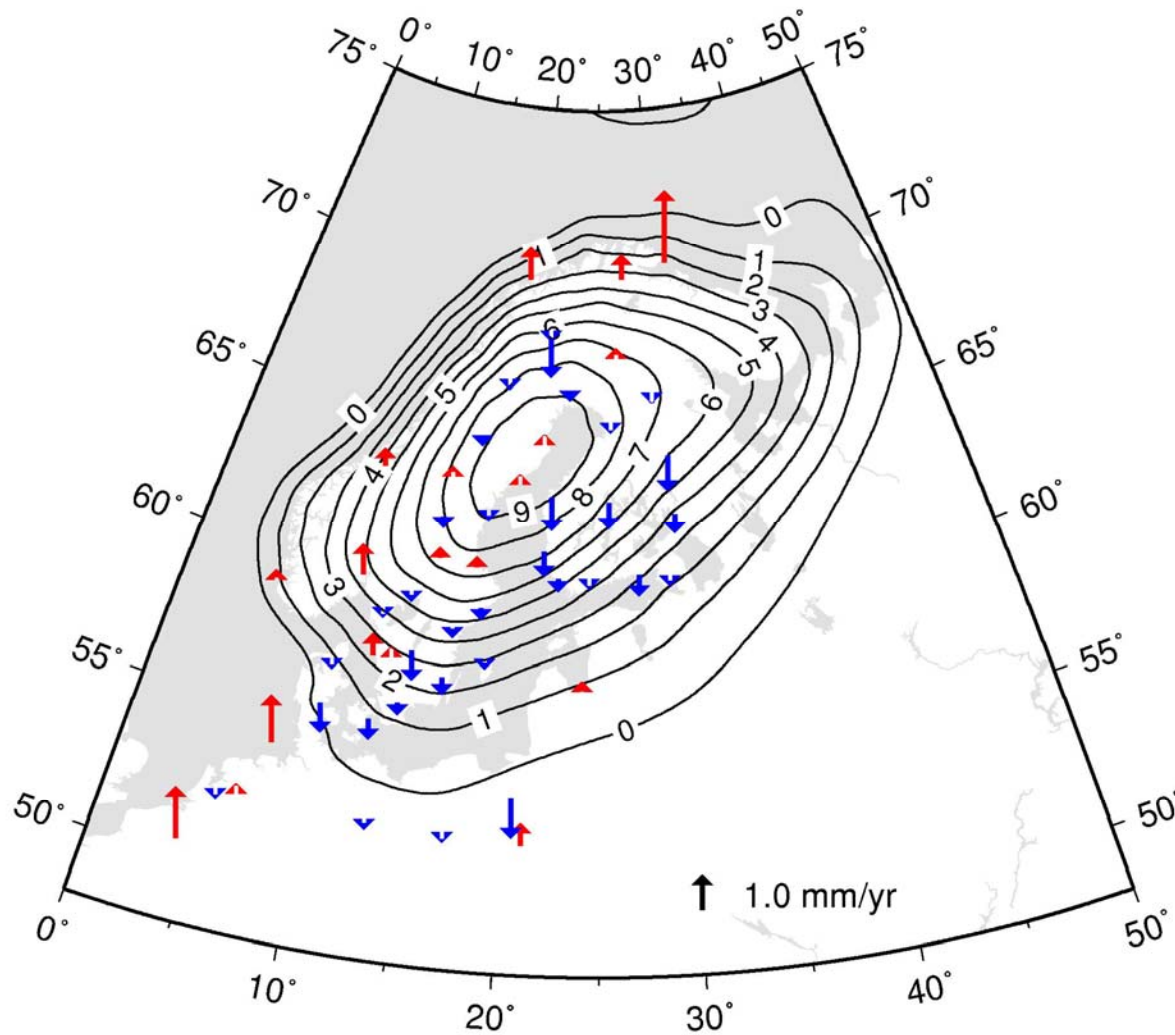
Spatial  
distribution

NKG2005LU\_ABS

Converted to gravity  
by multiplying  
with  $-0.18 \mu\text{gal}/\text{mm}$

Gravity residuals



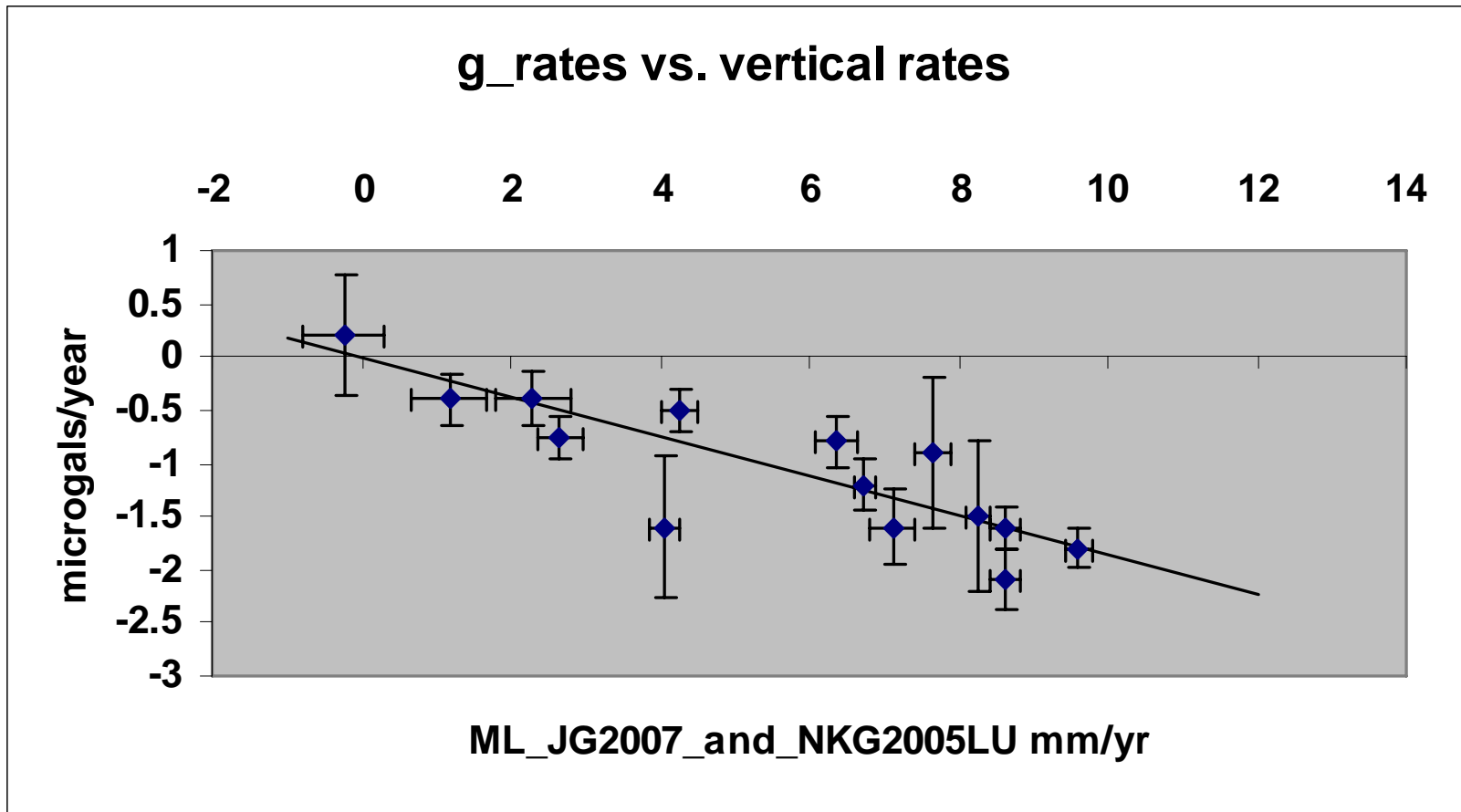


NKG2005LU\_ABS

New GPS solution by  
Martin Lidberg  
(Ph.D. thesis)  
transformed to  
ITRF2000

Residuals relative to  
NKG2005LU\_ABS

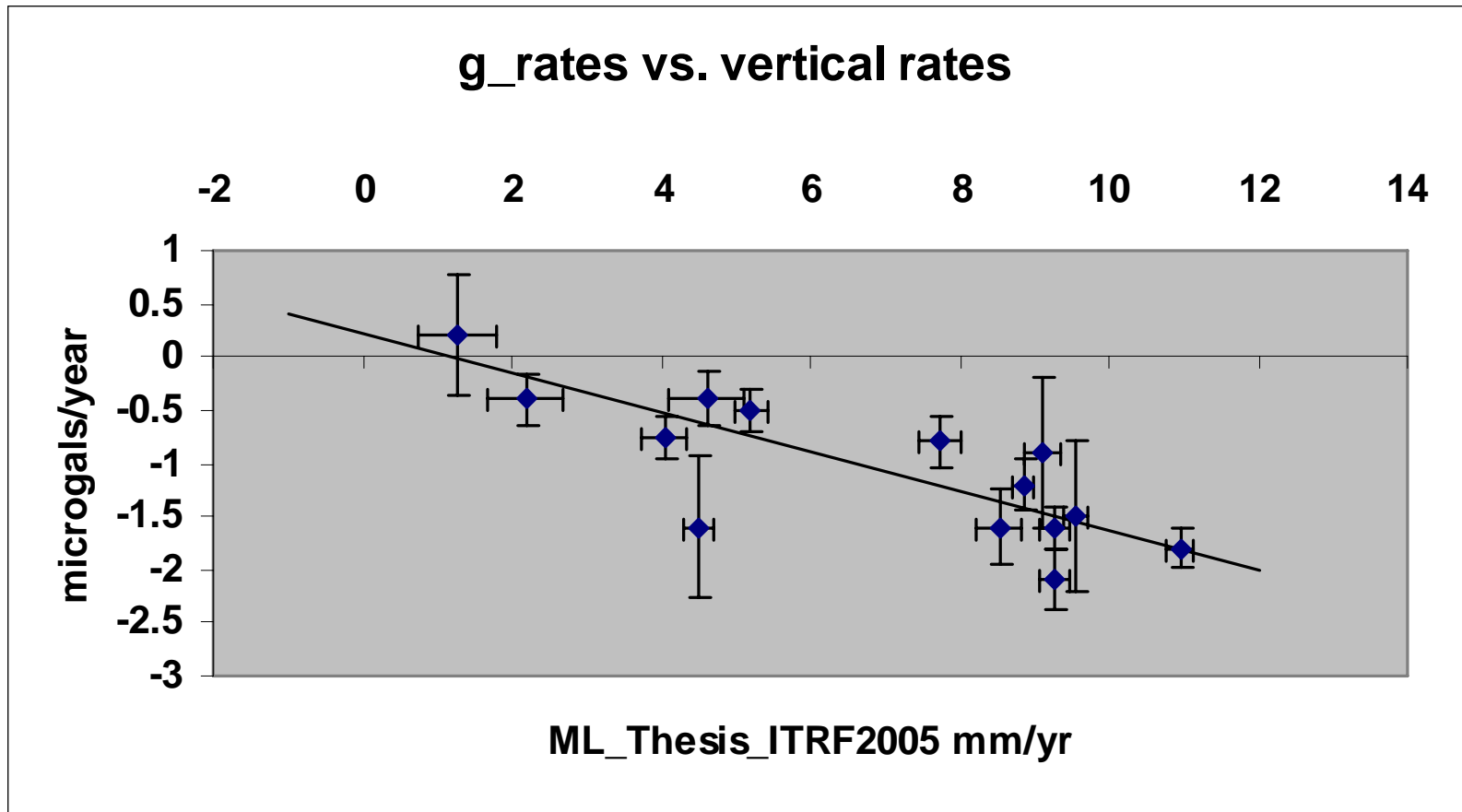
# Fitting of linear relationship abs\_g vs. GPS, part I



Slope  $-0.185 \pm 0.025 \mu\text{gal}/\text{mm}$  (1-sigma)

Intercept  $-0.01 \pm 0.16 \mu\text{gal}$

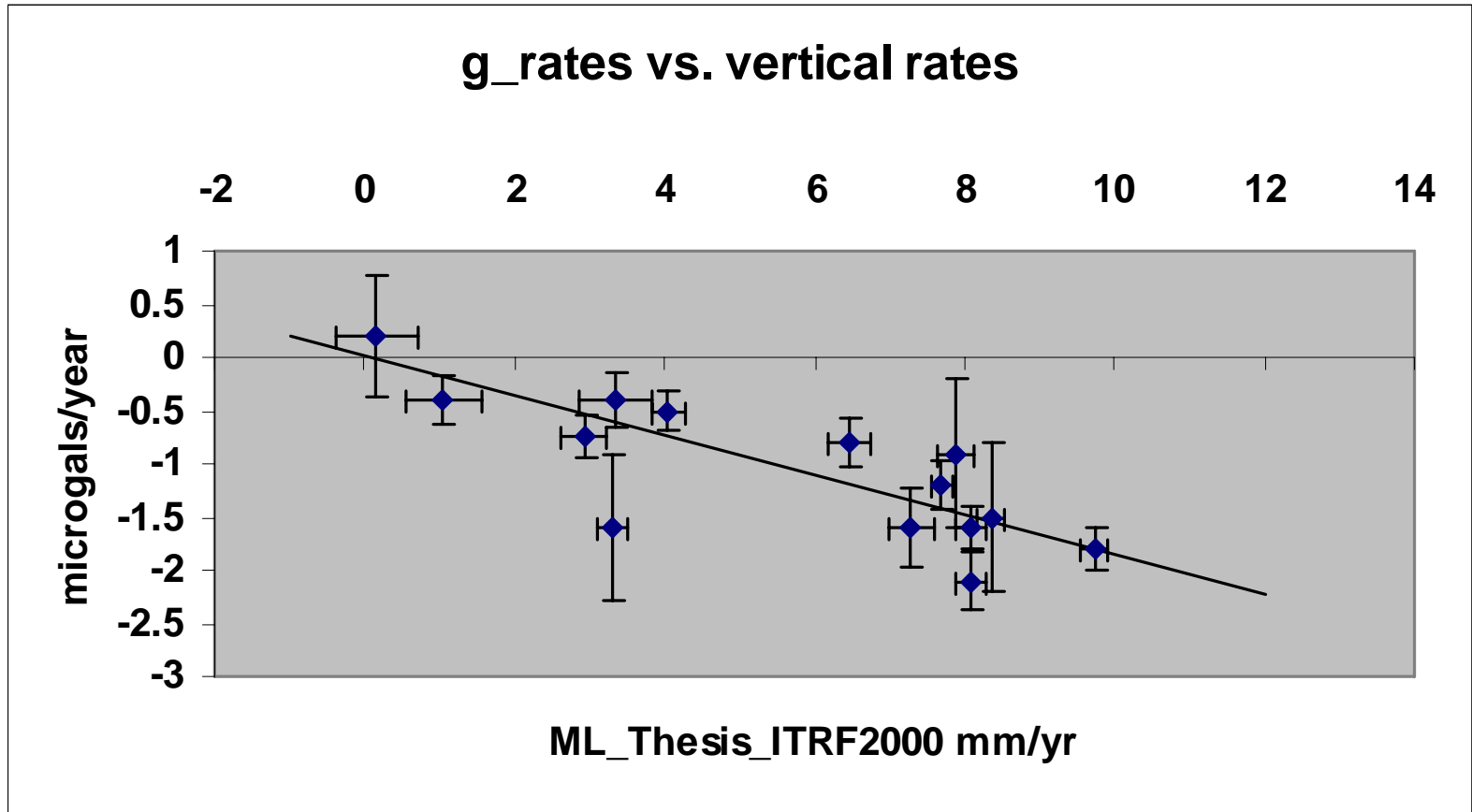
# Fitting of linear relationship abs\_g vs. GPS, part II



Slope  $-0.185 \pm 0.025 \mu\text{gal}/\text{mm}$  (1-sigma)

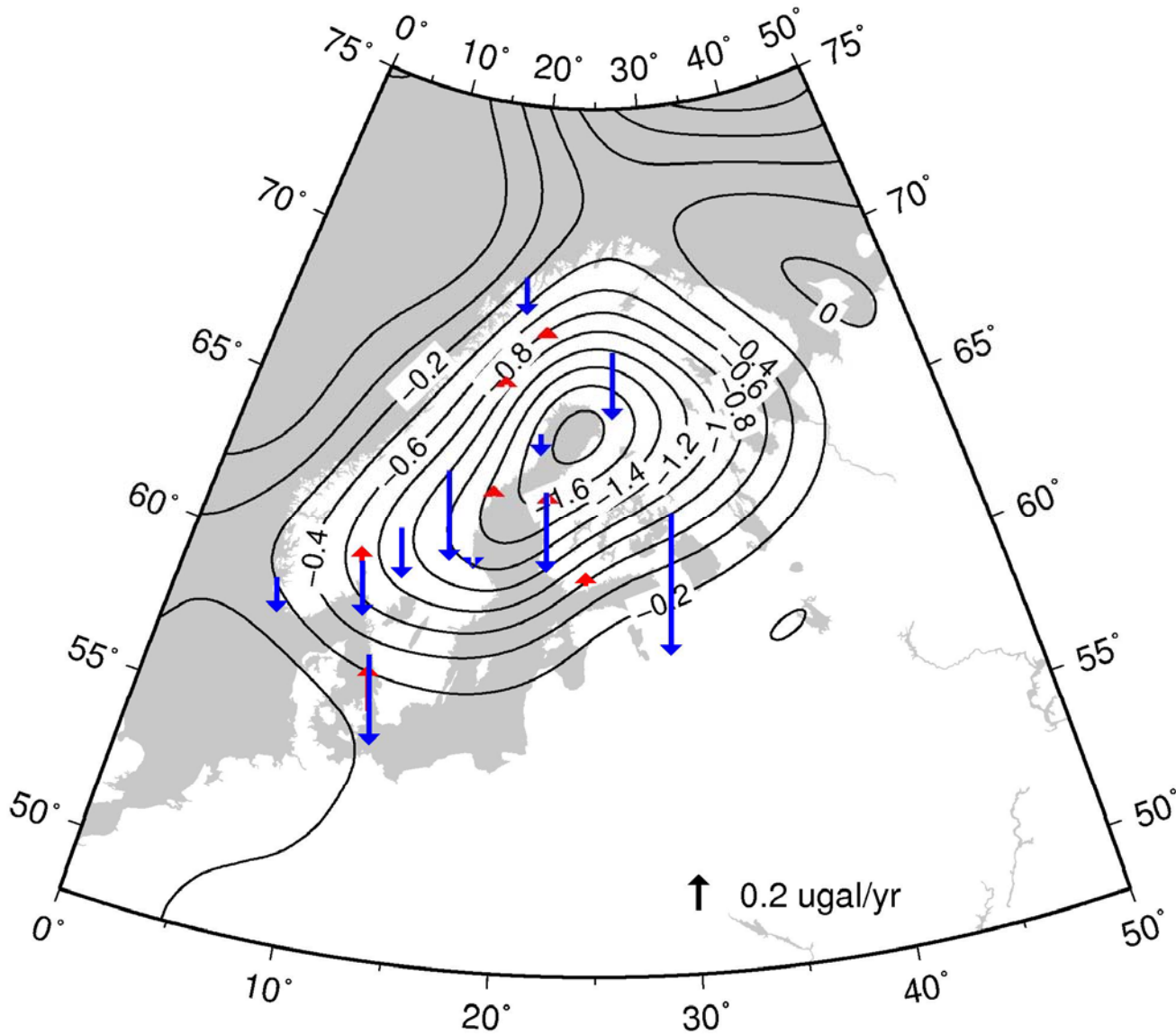
Intercept  $-0.22 \pm 0.19 \mu\text{gal}$

# Fitting of linear relationship abs\_g vs. GPS, part III



Slope  $-0.187 \pm 0.026 \mu\text{gal}/\text{mm}$  (1-sigma)

Intercept  $-0.01 \pm 0.16 \mu\text{gal}$



Peltier ICE-  
 5G(VM2)  
 converted with  
 $-0.154 \mu\text{gal/mm}$

$g_{\dot{}}$  as  
 independent data  
 to discriminate  
 between GIA  
 models?

mean  $-0.17 \mu\text{gal/yr}$   
 RMS  $0.32 \mu\text{gal/yr}$



Lambeck et al.  
(1998) converted  
with  
 $-0.154 \mu\text{gal}/\text{mm}$   
 $+1.1 \text{ mm}/\text{yr MSL}$   
6% geoid rise

$\dot{g}$  as independent  
data to discriminate  
between GIA  
models?

mean  $-0.11 \mu\text{gal}/\text{yr}$   
RMS  $0.39 \mu\text{gal}/\text{yr}$

