

## GRACE Science Data System Monthly Report July 2005

Prepared by:	Frank Flechtner	GFZ	flechtne@gfz-potsdam.de
Contributions by:	Srinivas Bettadpur	UTCSR	srinivas@csr.utexas.edu
	Mike Watkins	JPL	michael.m.watkins@jpl.nasa.gov
	Gerhard Kruizinga	JPL	gerhard.kruizinga@jpl.nasa.gov
Approved by:	Byron Tapley	UTCSR	tapley@csr.utexas.edu
	Christoph Reigber	GFZ	reigber@gfz-potsdam.de

### Highlights:

- GRACE project successfully completed the 2005 NASA Senior Review for Earth science missions. GRACE science was called "compelling", and a mission extension to 2009 was approved. The review report is available at <http://science.hq.nasa.gov/earth-sun/index.html>.
- Next GRACE Science Team Meeting (GSTM) will be held in Austin on October 13/14, 2005. Registration and housing information is available online at the meeting website <http://www.csr.utexas.edu/grace/GSTM>. Science Team attendees should register as soon as possible!

### Satellite Science Relevant Events:

- Nominal operation in Science Mode throughout the month
- The GRACE-1 Brouwer mean orbital elements on August 01, 2005 00:00:00 are as follows:

A [m] = 6844664.153

E [-] = 0.001622

I [°] = 89.031027

The satellites separation was 183 km on August 1 with a rate of 0.24 km/d. Thus, the next orbit maintenance maneuver has to be performed in about 9 months.

## Level-0 raw data dump reception statistics at DLR ground stations Weilheim and Neustrelitz:

GRACE-1 Housekeeping: 99.7 %  
 GRACE-1 Science: 100.0 %  
 GRACE-2 Housekeeping: 100.0 %  
 GRACE-2 Science: 100.0 %

## Level-1 Data Processing:

- Level-1B Release 01 instrument data have been processed at JPL and archived at GRACE-ISDC and JPL PO.DAAC.

The columns in the table are:

- A) KBR1B product name
- B) Total arc length with data (hours)
- C) Number of observations used in residual calculation
- D) KBR-GPS range residual RMS (cm)
- E) minimum KBR-GPS range residual (cm)
- F) maximum KBR-GPS range residual (cm)
- G) number of continuous segments in the KBR product

A	B	C	D	E	F	G
KBR1B_2005-06-24_X_01.dat	23.8	17116	1.62	-5.5	4.0	3
KBR1B_2005-06-25_X_01.dat	23.8	17162	1.54	-4.0	5.6	1
KBR1B_2005-06-26_X_01.dat	23.9	17181	1.91	-4.8	5.2	3
KBR1B_2005-06-27_X_01.dat	24.0	17280	1.65	-4.3	4.5	1
KBR1B_2005-06-28_X_01.dat	24.0	17280	1.74	-4.5	5.4	1
KBR1B_2005-06-29_X_01.dat	23.8	17145	1.79	-3.9	5.2	2
KBR1B_2005-06-30_X_01.dat	24.0	17260	1.63	-5.2	4.4	1
KBR1B_2005-07-01_X_01.dat	24.0	17260	1.74	-7.4	4.0	1
KBR1B_2005-07-02_X_01.dat	23.8	17125	1.48	-3.4	3.9	2
KBR1B_2005-07-03_X_01.dat	23.8	17130	1.69	-4.3	4.5	2
KBR1B_2005-07-04_X_01.dat	24.0	17260	1.57	-4.4	3.3	1
KBR1B_2005-07-05_X_01.dat	23.9	17185	1.35	-3.7	3.8	2

KBR1B_2005-07-06_X_01.dat	24.0	17241	1.61	-3.8	4.3	2
KBR1B_2005-07-07_X_01.dat	24.0	17229	1.89	-5.0	5.7	2
KBR1B_2005-07-08_X_01.dat	23.9	17171	1.42	-3.9	4.1	3
KBR1B_2005-07-09_X_01.dat	23.7	17081	1.57	-4.2	4.2	4
KBR1B_2005-07-10_X_01.dat	23.8	17113	1.61	-5.0	4.2	2
KBR1B_2005-07-11_X_01.dat	24.0	17280	1.66	-3.8	4.3	1
KBR1B_2005-07-12_X_01.dat	23.9	17185	1.91	-4.0	10.8	2
KBR1B_2005-07-13_X_01.dat	24.0	17260	2.09	-8.5	4.7	1
KBR1B_2005-07-14_X_01.dat	24.0	17260	1.47	-3.4	3.6	1
KBR1B_2005-07-15_X_01.dat	not yet distributed					
...						
KBR1B_2005-07-31_X_01.dat	not yet distributed					

- Release 01 Level-1B barotropic sea level products (OCN1B) and de-aliasing products (AOD1B) until July 25 were calculated by GFZ and archived at GRACE-ISDC.

#### **Level-2 Data Processing:**

- All 3 L2 centers at CSR, JPL and GFZ concentrated on improvements in the gravity model product quality and catching up on the remaining monthly field data processing.

#### **GRACE Product Distribution:**

- No Level-2 products have been delivered to the archives.

#### **Miscellaneous:**

- Selected and reviewed presentations from the July 2004 Joint CHAMP/GRACE Science Meeting will be published in a special issue of EGU's 'Advances of Geosciences'.
- Science data users are encouraged to submit citations of their own and other works related with GRACE to the bibliography web page implemented at PO.DAAC: <http://podaac.jpl.nasa.gov/grace/bibliography.html>.