GRACE Science Data System Monthly Report
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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

The GRACE Science Team members who acquire GRACE products at PO.DAAC should re-visit the public GRACE data website and double check that they have all products. For the present, the password protected site is not being updated with new products, only the public site is.
GRACE-ISDC does not distinguish between ST members and other users. Therefore double checking is not necessary.

Satellite Science Relevant Events:

- On September 6 GRACE-2 dropped to coarse pointing mode after an unsuccessful IPU (Instrument Processing Unit) reboot. An autonomous reboot was triggered 15 minutes later which transitioned GRACE-2 back to Science Mode operation.
- On September 8 simultaneous CoM (Center of Mass) calibrations were performed on both satellites. Preliminary analyses indicate that the offset is within uncertainties.
- The satellite switch maneuver, which was scheduled for mid of October, was postponed for at least 6 months. Instead an orbit maintenance maneuver was performed on September 29 to increase the orbit separation to 220 km.
- The GRACE-1 Brouwer mean orbital elements on October 01, 2004 00:00:00 are as follows:

  A [m] = 470144.5
  E [-] = 0.001611
  I [º] = 89.023207

  The satellites separation was 172 km on September 30 with a rate of +0.70 km/d. The next orbit maintenance maneuver will be needed in about 3-4 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: 99.3 %
GRACE-2 Science: 100.0 %

Level-1 Data Processing:

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

The following table gives provides statistical information on the available KBR1B products. 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_2004-08-28_X_00.dat	23.9	17226	2.05	-21.9	27.7	4
KBR1B_2004-08-29_X_00.dat	23.8	17126	1.59	-4.3	4.2	2
KBR1B_2004-08-30_X_00.dat	24.0	17280	1.48	-4.9	6.0	1
KBR1B_2004-08-31_X_00.dat	23.9	17204	1.54	-3.8	4.0	2
KBR1B_2004-09-01_X_00.dat	24.0	17260	1.57	-6.2	4.0	1
KBR1B_2004-09-02_X_00.dat	23.8	17125	1.52	-3.9	7.8	2
KBR1B_2004-09-03_X_00.dat	24.0	17260	1.56	-3.2	4.3	1
KBR1B_2004-09-04_X_00.dat	24.0	17260	1.80	-4.7	5.0	1
KBR1B_2004-09-05_X_00.dat	24.0	17260	1.36	-3.5	4.0	1
KBR1B_2004-09-06_X_00.dat	23.6	16973	1.85	-4.7	8.5	2
KBR1B_2004-09-07_X_00.dat	24.0	17280	1.36	-3.1	3.6	1

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KBR1B_2004-09-08_X_00.dat  23.9  17200  1.26    -2.8    3.6  2
KBR1B_2004-09-09_X_00.dat  24.0  17280  1.62    -5.3    4.3  1
KBR1B_2004-09-10_X_00.dat  22.5  16185  1.39    -3.4    4.7  2
KBR1B_2004-09-11_X_00.dat  23.6  16972  1.51    -3.8    3.4  1
KBR1B_2004-09-12_X_00.dat  24.0  17280  1.55    -4.1    3.8  1
KBR1B_2004-09-13_X_00.dat  24.0  17280  1.40    -3.4    3.6  1
KBR1B_2004-09-14_X_00.dat  24.0  17280  1.60    -5.6    4.8  1
KBR1B_2004-09-15_X_00.dat  23.8  17145  1.61    -3.8    3.9  2
KBR1B_2004-09-16_X_00.dat  23.8  17125  1.78    -4.0    6.7  2
KBR1B_2004-09-17_X_00.dat  24.0  17260  1.53    -4.6    4.0  1
KBR1B_2004-09-18_X_00.dat   --- not yet processed ---
   …
KBR1B_2004-09-30_X_00.dat   --- not yet processed ---
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Additionally all level-1B barotropic sea level products (OCN1B) and de-aliasing products (AOD1B) until September 30 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 fields data processing.

GRACE Product Distribution:

- CSR has provided a monthly gravity field solution for July 2004.

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.