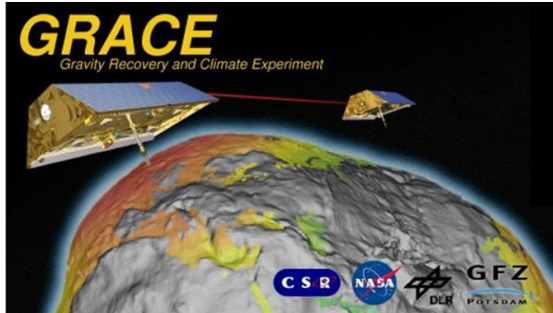


GRACE Science Data System Monthly Report

August 2011



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Highlights:

- CSR, JPL and GFZ have generated and delivered RL04 Level-2 products for August 2011.
- The Proceedings of the 2011 Grace Science Team Meeting are now online. See the Past Meetings link to the right at <http://www.csr.utexas.edu/grace/GSTM/>.

Satellite Science Relevant Events:

- Operations in Science Mode throughout the month except for the periods highlighted in the L1B Data Processing section below.
- The actual mission status can be monitored at http://www.csr.utexas.edu/grace/operations/mission_status/.

- The GRACE-1 Brouwer mean orbital elements on September 1, 2011 00:00:00 are as follows:

A [m] = 6832135.989
E [-] = 0.001471
I [°] = 89.001565

- The satellites separation was 192 km on September 1, 2011 with a rate of 1.25 km/d.

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

GRACE-A Housekeeping:	100.0 %	GRACE-B Housekeeping:	100.0 %
GRACE-A Science:	100.0 %	GRACE-B 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. Please refer to the statistics below.
- Notes:
 - On 2011-08-17 GRACE-B performed orbital maintenance maneuver OTM-10 from 06:37:00 to 06:39:00. The KBR1B data is available during the maneuver but deemed unreliable +/- 5 min around the maneuver. During the maneuver the ACC data are saturated and were removed for the ACC1B data generation.
 - On 2011-08-19 GRACE-A and GRACE-B executed a 90 deg yaw turn to discharge the batteries during the full sun period. The turns started 16:21 and ended at 16:59. The KBR1B data is missing in during this interval.
 - On 2011-08-25 GRACE-A and GRACE-B executed a 90 deg yaw turn to discharge the batteries during the full sun period. The turns started 14:35 and ended at 15:13. The KBR1B data is missing in during this interval. On GRACE-B dual star camera operations ceased at 09:25. Nominal operations were restored on 2011-08-26 06:54:04
 - For 2011-08-26 see note 2011-08-25
 - On 2011-08-31 GRACE-A and GRACE-B executed a 90 deg yaw turn to discharge the batteries during the full sun period. The turns started 14:15 and ended at 15:03. The KBR1B data is missing in during this interval.
- **KBR statistics:**
 - 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_2011-08-01_X_01.dat	24.0	17280	0.36	-2.1	1.2	1	
KBR1B_2011-08-02_X_01.dat	24.0	17280	0.24	-1.1	0.6	1	
KBR1B_2011-08-03_X_01.dat	24.0	17280	0.32	-0.8	1.7	1	
KBR1B_2011-08-04_X_01.dat	24.0	17280	0.41	-1.6	2.3	1	
KBR1B_2011-08-05_X_01.dat	24.0	17280	0.38	-1.9	1.0	1	
KBR1B_2011-08-06_X_01.dat	24.0	17280	0.68	-3.6	3.0	1	

KBR1B_2011-08-07_X_01.dat	24.0	17280	0.23	-0.8	0.7	1
KBR1B_2011-08-08_X_01.dat	24.0	17280	0.28	-0.7	1.1	1
KBR1B_2011-08-09_X_01.dat	23.8	17145	0.33	-0.9	1.2	2
KBR1B_2011-08-10_X_01.dat	24.0	17280	0.22	-0.7	0.6	1
KBR1B_2011-08-11_X_01.dat	24.0	17280	0.23	-0.8	0.7	1
KBR1B_2011-08-12_X_01.dat	24.0	17257	0.23	-0.8	0.7	2
KBR1B_2011-08-13_X_01.dat	24.0	17280	0.22	-0.6	0.6	1
KBR1B_2011-08-14_X_01.dat	24.0	17280	0.30	-0.8	1.2	1
KBR1B_2011-08-15_X_01.dat	24.0	17280	0.29	-0.8	1.0	1
KBR1B_2011-08-16_X_01.dat	23.8	17158	0.26	-0.7	1.1	4
KBR1B_2011-08-17_X_01.dat	24.0	17257	1.75	-62.8	4.5	2
KBR1B_2011-08-18_X_01.dat	23.9	17194	0.29	-1.8	0.7	2
KBR1B_2011-08-19_X_01.dat	23.2	16679	0.34	-1.5	1.5	3
KBR1B_2011-08-20_X_01.dat	24.0	17280	0.36	-1.5	1.1	1
KBR1B_2011-08-21_X_01.dat	24.0	17280	0.25	-0.7	1.0	1
KBR1B_2011-08-22_X_01.dat	24.0	17280	0.34	-1.4	1.0	1
KBR1B_2011-08-23_X_01.dat	24.0	17280	0.26	-0.9	0.9	1
KBR1B_2011-08-24_X_01.dat	24.0	17280	0.29	-1.0	1.1	1
KBR1B_2011-08-25_X_01.dat	23.1	16624	0.86	-1.5	5.9	4
KBR1B_2011-08-26_X_01.dat	23.8	17145	0.36	-1.8	1.2	2
KBR1B_2011-08-27_X_01.dat	24.0	17280	0.26	-0.9	1.3	1
KBR1B_2011-08-28_X_01.dat	24.0	17280	0.27	-1.1	0.8	1
KBR1B_2011-08-29_X_01.dat	24.0	17280	0.66	-2.3	3.9	1
KBR1B_2011-08-30_X_01.dat	24.0	17280	0.33	-1.1	1.6	1
KBR1B_2011-08-31_X_01.dat	23.2	16703	0.31	-0.9	1.0	2

Following JPL RL00 (yellow) and RL01 (green) LIB products are publicly available. June and July 2002 (red) are not provided due to accelerometer problems. See also comment in the Highlights Section. For January and June 2011 (blue) no accelerometer data are available (see corresponding newsletters).

- **JPL:** GSM version 4.1 labeled “*JPLEM_0001_0004” along with the GAA, GAB, GAC and GAD background model files and calibrated errors (GSM*.txt) are available for the period April 2002 until August 2011. Details are listed in the JPL L2 Release Notes.

JPL RL04	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002												
2003												
2004												
2005												
2006												
2007												
2008												
2009												
2010												
2011												

- GFZ has stopped RL03 processing (Feb 2003 until Jan 2007 available at the archives. For further details refer to the GFZ RL03 release notes for Level-2 products).
- CSR has stopped RL01 processing. (Apr. 2002 until Dec 2006 available at the archives. For further details refer to the CSR RL01 release notes for Level-2 products).
- JPL has stopped RL02 processing (January 2003 until November 2005 available at the archives. For further details refer to the JPL RL02 release notes for Level-2 products).
- TN05 containing C20 estimates derived from SLR and using GRACE RL04 standards is periodically updated.

Miscellaneous:

- The following acknowledgement shall be added to any new GRACE related publication (paper, poster etc.): *Acknowledgement: We would like to thank the German Space Operations Center (GSOC) of the German Aerospace Center (DLR) for providing continuously and nearly 100% of the raw telemetry data of the twin GRACE satellites.*
- A list of GRACE related publications which can be sorted by author or date is available at http://www.gfz-potsdam.de/portal/gfz/Struktur/Departments/Department+1/sec12/projects/grace/grace_publications (current status: 801 papers). This list maybe still incomplete. If you are missing a publication please send an e-mail to Frank Flechtner (flechtne@gfz-potsdam.de).
- 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>.