

GRACE Follow-On

Science Data System Newsletter

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GRACE Follow-On Science Data System: Highlights & Updates

- The **GRACE/GRACE-FO Science Team Meeting 2020** took place virtually from Oct 26-30, 2020 (visit <https://www.gstm-2020.eu/> for more information). Currently, the compilation of the meeting proceedings is ongoing (contact authors can upload the final version of their presentations until 20 Dec, 2020).
- The **AGU Fall Meeting 2020** is taking place online through **17 Dec, 2020**. See <https://agu.confex.com/agu/fm20/webprogram/programs.html> to search for GRACE(-FO) related sessions and abstracts.
- The following **SDS data products** are now available at NASA's Physical Oceanography Distributed Active Archive Center ([PO.DAAC](#)) and GFZ's Information System and Data Center ([ISDC](#)):
 - **Level-1** SDS data products through **Oct 2020**.
 - **Level-2** data products through **Sep 2020**.
- The following corresponding **Level-3 data** products (global, land, ocean, ice) are available:
 - JPL Tellus global mascon products: https://grace.jpl.nasa.gov/data/get-data/jpl_global_mascons/
 - GFZ GravIS land, ocean and ice products: <http://gravis.gfz-potsdam.de/>
 - UT-CSR global mascon solutions: http://www2.csr.utexas.edu/grace/RL06_mascons.html
- Do you have exciting new GRACE-FO results, a conference presentation or paper publication you would like to share? Please send a copy of your GRACE and GRACE-FO related publications to landerer@jpl.nasa.gov and flechtne@gfz-potsdam.de (please also consider a 1-slide highlight summary of the main findings).
 - GRACE-FO Mission reference paper: Landerer, F.W., Flechtner, F., et al., 2020, Extending the global mass change data record: GRACE Follow-On instrument and science data performance, Geophys. Res. Lett., <https://doi.org/10.1029/2020GL088306>.



Calendar & Upcoming Events:

- The EGU General Assembly 2021 will take place entirely online from 19 - 30 Apr, 2021. See <https://www.egu21.eu/> to search for GRACE(-FO) related sessions. Abstract submission deadline will be on 13 Jan, 2021 at 13:00 CET.
- GRACE / GRACE-FO Science Team Meeting 2021 will most likely take place in Oct-2021; exact time & location are TBD.

GRACE Follow-On: Mission Status

GRACE Follow-On: Orbit

The GRACE Follow-On orbital parameters on 20201201 (day 336) were as follows:

Sun Beta (deg)	-44
Absolute Distance (km)	179.6
Drift (km/d)	0.15
Mean Altitude (>6378.1 km)	490.2
Decay Rate (GF1/GF2) (7d mean, m/d)	4.6 / 4.6

Science-relevant Mission Events & Plans:

- Both accelerometers (ACCs) are operating and collecting observations in their nominal mode, Normal Range Mode (NRM). GF1 ACC data are used to generate an ACC transplant data product which is provided as the ACT1B product and should be used to substitute the GF2 ACC measurements (please check the ACT-Readme document for details at [PO.DAAC](#)).
- Center-of-Mass offset determinations are performed approx. every 6 months.
- Additional calibration periods, spacecraft activities and events are highlighted in the Level-1 v04 notes and event log below.

Level-1, Level-2, Level-3 Data Products and Processing

Level-1 Data Processing & Delivery

- [2020-07-10]: JPL SDS Level-1 has updated the v04 LRI data processing to (1) improve the removal of LRI phase jumps, and to (2) reduce the noise of the time-of-flight (TOF) correction for range-acceleration to the level of 1 nm/s²; Please see [Level-1 Release Notes](#) for details.
- Level-1 data products (current version: v04), which are available at NASA's Physical Oceanography Distributed Active Archive Center ([PO.DAAC](#)) and GFZ's Information



System and Data Center ([ISDC](#)), are continuously updated approximately every 7 days. The Level-1 data includes all data required for the generation of Level-2 gravity field products. Please refer to Level-1 release notes, documentation, as well as to the Sequence-of-Events (SOE) logfile for important updates, comments and detailed description of the data, file formats, and conventions ([PO.DAAC](#) / [ISDC](#)).

KBR Performance Statistics

- [see Appendix 1A (p. 5)]

Level-1 Data Product Availability

- [see Appendix 1B (p. 7) for GRACE-FO Level-1 data]
- [see Appendix 1C (p. 7) for de-aliasing AOD1B model data]

Level-1 Release Notes & Sequence of Events

- [see Appendix 1D (p. 7)]

Level-2 Data Processing & Delivery

Level-2 Data availability

- Level-2 Release 06 data have been processed at JPL, GFZ and CSR and are archived at JPL [PO.DAAC](#) and GFZ [ISDC](#). The Level-2 products include the monthly gravity fields from the three mission Science Data System centers (JPL, GFZ, CSR), as well as the corresponding atmosphere and ocean dealiasing (AOD) background model data.
- Please refer to the Level-2 Release Notes and documentation description of the data for file formats, updates, conventions, as well as important processing recommendations ([PO.DAAC](#) / [ISDC](#)).
- [see Appendix 2A (p. 7) for overview tables on data availability].

Level-2 Ancillary Products and Comments

- [TN-14](#) contains C20 & C30 estimates derived from SLR and using Level-2 RL06 standards, updated in synch with Level-2 monthly releases. It is recommended to replace the native GRACE & GRACE-FO C20 & C30 coefficients with this product (Loomis et al., 2019).
- [TN-13\[a,b,c\]](#) contains geocenter estimates using the methods of Swenson et al. (2010) and Sun et al. (2016), and is updated in synch with Level-2 monthly releases. It is recommended to augment the GRACE / GRACE-FO geocenter with this product for surface mass change estimation.

Level-3 Data Processing & Delivery

- SDS Level-3 monthly global grids of mass changes are generated by JPL and available at [PO.DAAC](#).



Resources and Links:

Data Archives (Level 1-3):

- JPL/NASA PO.DAAC (<http://podaac.jpl.nasa.gov>)
- GFZ ISDC (<https://isdc.gfz-potsdam.de/grace-fo-isdc>)

Miscellaneous Links:

- For GRACE Follow-On mission updates and news, please visit <https://gracefo.jpl.nasa.gov> and <http://gfz-potsdam.de/en/grace-fo>.
- The proceedings of previous GRACE / GRACE-FO Science Team Meetings are available at <https://www.gfz-potsdam.de/en/grace/>.
- **GRACE and GRACE-FO related publications** are available via searchable databases:
 - http://www-app2.gfz-potsdam.de/pb1/op/grace/references/sort_date.html
 - <https://grace.jpl.nasa.gov/publications/>
 - If you are missing a publication please send an e-mail to Frank Flechtner (flechtne@gfz-potsdam.de) and contact the JPL team via <https://grace.jpl.nasa.gov/about/feedback/>.

Appendix

1.A - KBR Performance Statistics

KBR QUALITY ASSESSMENT

Key to columns in the table below

- 1) KBR1B product name
- 2) Total arc length with data (hours)
- 3) Number of observations used in KBR-GPS range residual calculation
- 4) KBR-GPS range residual RMS (mm)
- 5) Minimum KBR-GPS range residual (mm)
- 6) Maximum KBR-GPS range residual (mm)
- 7) Number of continuous segments in the KBR product

KBR1B_2020-09-01_Y_04.dat	24.0	17280	5.24	-39.0	13.1	1
KBR1B_2020-09-02_Y_04.dat	24.0	17280	3.27	-11.2	17.5	1
KBR1B_2020-09-03_Y_04.dat	24.0	17280	3.15	-12.9	15.0	1
KBR1B_2020-09-04_Y_04.dat	24.0	17280	4.45	-13.5	24.8	1
KBR1B_2020-09-05_Y_04.dat	24.0	17280	2.95	-11.3	12.6	1
KBR1B_2020-09-06_Y_04.dat	24.0	17280	4.11	-16.3	19.7	1
KBR1B_2020-09-07_Y_04.dat	24.0	17280	3.04	-9.1	19.3	1
KBR1B_2020-09-08_Y_04.dat	24.0	17167	2.75	-7.8	11.2	2
KBR1B_2020-09-09_Y_04.dat	24.0	17280	4.11	-14.6	62.6	1
KBR1B_2020-09-10_Y_04.dat	24.0	17159	3.04	-7.1	14.5	2
KBR1B_2020-09-11_Y_04.dat	24.0	17280	3.65	-12.9	22.6	1
KBR1B_2020-09-12_Y_04.dat	24.0	17280	3.96	-26.8	12.6	1
KBR1B_2020-09-13_Y_04.dat	24.0	17280	1.10	-6.1	3.9	1
KBR1B_2020-09-14_Y_04.dat	24.0	17280	1.36	-4.9	4.4	1
KBR1B_2020-09-15_Y_04.dat	24.0	17169	1.59	-5.8	6.3	2
KBR1B_2020-09-16_Y_04.dat	24.0	17280	1.29	-4.4	5.3	1
KBR1B_2020-09-17_Y_04.dat	24.0	17280	1.30	-3.6	4.6	1
KBR1B_2020-09-18_Y_04.dat	24.0	17067	2.31	-15.5	6.1	2
KBR1B_2020-09-19_Y_04.dat	24.0	17280	1.70	-8.7	6.1	1
KBR1B_2020-09-20_Y_04.dat	24.0	17280	1.37	-4.4	5.0	1
KBR1B_2020-09-21_Y_04.dat	24.0	17280	1.57	-6.4	5.0	1
KBR1B_2020-09-22_Y_04.dat	24.0	17280	1.43	-4.5	3.6	1
KBR1B_2020-09-23_Y_04.dat	24.0	17155	1.29	-3.7	3.1	2
KBR1B_2020-09-24_Y_04.dat	24.0	17280	1.37	-4.0	5.3	1
KBR1B_2020-09-25_Y_04.dat	24.0	17280	1.39	-4.5	6.7	1
KBR1B_2020-09-26_Y_04.dat	24.0	17280	1.37	-5.3	4.7	1
KBR1B_2020-09-27_Y_04.dat	24.0	17137	1.23	-4.4	4.1	2
KBR1B_2020-09-28_Y_04.dat	24.0	17280	1.59	-6.0	3.5	1
KBR1B_2020-09-29_Y_04.dat	24.0	17280	1.58	-5.2	5.6	1
KBR1B_2020-09-30_Y_04.dat	24.0	17280	1.33	-4.5	4.4	1
KBR1B_2020-10-01_Y_04.dat	24.0	17280	3.99	-11.1	22.2	1
KBR1B_2020-10-02_Y_04.dat	24.0	17155	3.36	-18.1	9.7	2

GRAVITY RECOVERY AND CLIMATE EXPERIMENT *Follow-On*

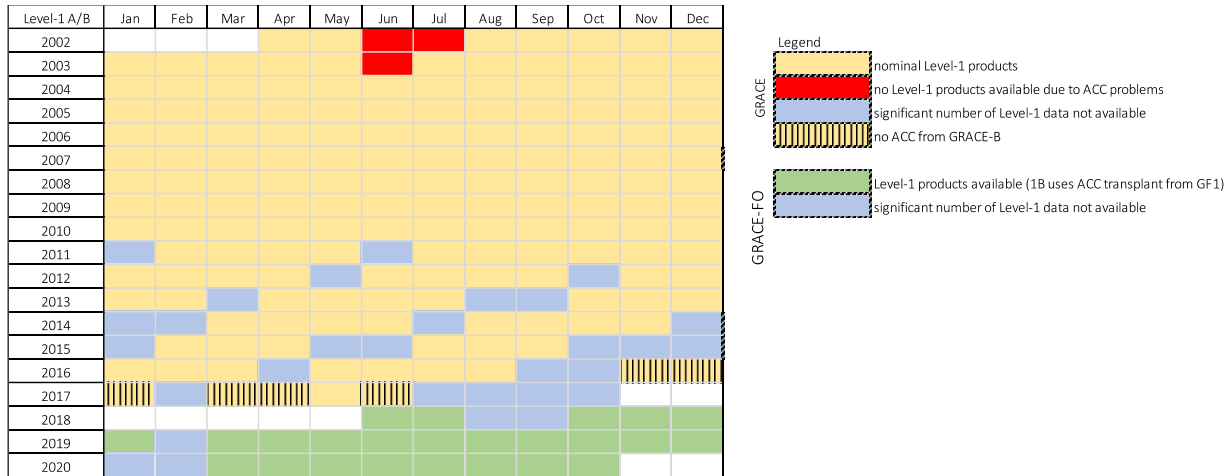


KBR1B_2020-10-03_Y_04.dat	24.0	17039	3.25	-9.0	19.9	2
KBR1B_2020-10-04_Y_04.dat	24.0	17280	5.47	-34.4	16.6	1
KBR1B_2020-10-05_Y_04.dat	24.0	17280	6.22	-32.2	32.2	1
KBR1B_2020-10-06_Y_04.dat	24.0	17280	2.94	-11.3	9.1	1
KBR1B_2020-10-07_Y_04.dat	24.0	17280	3.68	-13.7	14.0	1
KBR1B_2020-10-08_Y_04.dat	24.0	17112	3.67	-25.0	10.2	2
KBR1B_2020-10-09_Y_04.dat	24.0	17177	3.68	-15.8	17.2	2
KBR1B_2020-10-10_Y_04.dat	24.0	17251	3.38	-9.0	23.9	2
KBR1B_2020-10-11_Y_04.dat	24.0	17280	3.73	-15.3	21.2	1
KBR1B_2020-10-12_Y_04.dat	24.0	16864	3.86	-20.7	11.4	3
KBR1B_2020-10-13_Y_04.dat	24.0	17193	2.78	-10.4	10.2	2
KBR1B_2020-10-14_Y_04.dat	24.0	17280	3.02	-16.5	11.3	1
KBR1B_2020-10-15_Y_04.dat	24.0	17280	2.94	-13.3	7.8	1
KBR1B_2020-10-16_Y_04.dat	24.0	17145	3.13	-8.7	14.1	2
KBR1B_2020-10-17_Y_04.dat	24.0	17280	3.13	-15.0	11.3	1
KBR1B_2020-10-18_Y_04.dat	24.0	17115	3.24	-13.9	18.1	2
KBR1B_2020-10-19_Y_04.dat	24.0	17280	4.24	-7.8	33.8	1
KBR1B_2020-10-20_Y_04.dat	24.0	16457	2.87	-10.4	10.2	3
KBR1B_2020-10-21_Y_04.dat	24.0	17049	3.96	-10.0	29.0	2
KBR1B_2020-10-22_Y_04.dat	24.0	17141	4.06	-12.2	14.2	2
KBR1B_2020-10-23_Y_04.dat	24.0	16771	3.00	-12.8	9.1	2
KBR1B_2020-10-24_Y_04.dat	24.0	17280	3.49	-10.9	16.6	1
KBR1B_2020-10-25_Y_04.dat	24.0	17280	3.89	-13.9	14.7	1
KBR1B_2020-10-26_Y_04.dat	24.0	17280	3.02	-15.4	11.7	1
KBR1B_2020-10-27_Y_04.dat	24.0	16687	2.87	-8.1	12.9	3
KBR1B_2020-10-28_Y_04.dat	24.0	17280	7.31	-21.2	54.2	1
KBR1B_2020-10-29_Y_04.dat	24.0	16981	3.22	-8.3	17.7	2
KBR1B_2020-10-30_Y_04.dat	24.0	17034	4.80	-27.7	9.1	4
KBR1B_2020-10-31_Y_04.dat	24.0	17077	3.14	-7.8	18.3	4

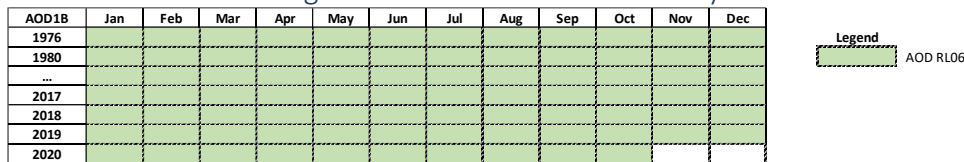


1.B – Level-1 GRACE-FO Data Availability

Table 1: Current version: Level-1 v04.



1.C – Level-1 De-aliasing Model AOD1B Data Availability



- For more information on the AOD de-aliasing AOD1B model please visit <https://www.gfz-potsdam.de/en/aod1b/>.

1.D - Level-1 Release Notes & Sequence of Events

See table below for current release period. All times in UTC:

2020-09-08	GRACE-D IPU reboot (spontaneous) at 02:31:10
2020-09-09	GRACE-D An orbit maneuver was performed at 08:15 for 5 seconds (providing a delta-v of 0.065 cm/s) to reverse the drift between the spacecraft.
2020-09-10	GRACE-C IPU reboot (spontaneous) at 12:52:00
2020-09-15	GRACE-D IPU reboot (spontaneous) at 00:52:40
2020-09-17	GRACE-C Ongoing KBR calibration: started at 05:27 and ended at 16:30.
	KBR calibrations maneuvers:
	-pitch from 05:37 to 06:40
	+pitch from 08:46 to 09:49
	-yaw from 11:55 to 12:58
	+yaw from 15:04 to 16:07
	LRI dropped to re-acquisition mode while KBR calibration maneuvers were executed on GF1.
2020-09-18	GRACE-C IPU reboot (spontaneous) at 00:33:50
2020-09-23	GPS PRN #32 was disabled from 2020-09-22 19:45 to 2020-09-23 09:15 due to an announced period of unavailability.
	The following IPU reboots were commanded to resume tracking to all available GPS satellites.
	GRACE-D IPU reboot (commanded) at 09:40:40
	GRACE-C IPU reboot (commanded) at 09:46:20
2020-09-24	GRACE-D Large impulsive signature (most likely an impact) is present in the GF2 ACC data around 22:32:11. This can be seen in the KBR and LRI data as well (most noticeably in Level-2 pre/post fits
2020-09-27	a significant KBR SNR drop on GF2 around 23:16 just before the IPU reboot.

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	GRACE-D IPU reboot (spontaneous) at 23:20:40
2020-09-28	GRACE-D Ongoing KBR calibration: started at 04:55 and ended at 16:00.
	KBR calibrations maneuvers:
	-pitch from 05:05 to 06:08
	+pitch from 08:15 to 09:18
	-yaw from 11:25 to 12:28
	+yaw from 14:35 to 15:38
	LRI dropped to re-acquisition mode while KBR calibration maneuvers were executed on GF2.
2020-10-02	GRACE-C IPU reboot (spontaneous) at 04:59:20
2020-10-03	GRACE-C IPU reboot (commanded) at 19:07:20
	GRACE-D IPU reboot (commanded) at 19:02:40
2020-10-08	GPS PRN #19 is disabled in the IPU (07:00 - 20:30) due to an announced period of unavailability
	The following IPU reboots are to resume tracking to all available GPS satellites
	GRACE-D IPU reboot (commanded) at 21:00:40
	GRACE-C IPU reboot (commanded) at 21:05:50
2020-10-09	GRACE-D IPU reboot (spontaneous) at 00:51:40
2020-10-12	GRACE-D IPU reboot twice (spontaneous) at 02:15:40 and at 02:32:30
	The second time the IPU rebooted from the default library and hard-coded parameters were loaded (occultation antenna switched on).
	A clean-up to re-instate parameters was performed at 06:04 (occultation antenna switched off).
	GRACE-C IPU reboot (spontaneous) at 17:49:40
2020-10-13	GRACE-C IPU reboot (spontaneous) at 17:29:50
2020-10-15	GRACE-C L2C Radio Occultation measurements for PRN 4,7 and 18 were enabled in the IPU at 16:20.
2020-10-16	GRACE-C IPU reboot (commanded) at 23:36:30
	GRACE-D IPU reboot (commanded) at 23:32:30
	GPS PRN#1 was disabled in the IPU (10:00 - 23:30) due to an announced period of unavailability.
2020-10-18	GRACE-D IPU reboot (spontaneous) at 15:40:00.
2020-10-20	GRACE-C IPU reboot (spontaneous) at 23:34:50
	GRACE-D IPU reboot (spontaneous) at 16:15:50
	GRACE-D IPU reboot (spontaneous) at 21:53:20
	GRACE-D IPU reboot (spontaneous) at 23:28:50
	GRACE-C CoM Calibrations:
	09:20:30 – 09:23:30 / PITCH / lon = -48° / 8° < lat < 20°
	11:09:00 – 11:12:00 / ROLL / lon = -73° / 61.8° < lat < 73.2°
	12:44:00 – 12:47:00 / ROLL / lon = -97° / 63.6° < lat < 75.0°
	14:18:00 – 14:21:00 / PITCH / lon = -120° / 61.5° < lat < 72.9°
	15:53:00 – 15:56:00 / PITCH / lon = -144° / 63.2° < lat < 74.6°
	21:57:00 – 22:00:00 / YAW / lon = 121° / 9.1° < lat < 20.5°
	23:32:00 – 23:35:00 / YAW / lon = 98° / 10.7° < lat < 22.2°
	GRACE-D CoM Calibrations:
	10:00:30– 10:03:30 / YAW / lon = 121° / 20.1° > lat > 8.6°
	11:35:00– 11:38:00 / YAW / lon = 97° / 20.4° > lat > 8.8°
	12:55:00 – 12:58:00 / ROLL / lon = 74° / 76.0° > lat > 64.6°
	14:29:00 – 14:32:00 / ROLL / lon = 50° / 78.0° > lat > 66.7°
	16:05:00 – 16:08:00 / PITCH / lon = 27° / 72.6° > lat > 61.2°
	17:38:00 – 17:41:00 / PITCH / lon = 3° / 78.5° > lat > 67.1°
	21:02:00 – 21:05:00 / PITCH / lon = -45° / 21.5° > lat > 10.0°
2020-10-21	GRACE-C IPU reboot (commanded) at 00:10:10
	GRACE-D IPU reboot (commanded) at 00:05:30
	GRACE-D IPU reboot (spontaneous) at 23:12:10
2020-10-22	GRACE-C IPU reboot (spontaneous) at 23:09:50
2020-10-23	GPS PRN #2 was disabled in the IPU from 2020-10-22 11:30 to 2020-10-23 01:00 due an announced period of unavailability.
	The commanded reboots near 01:05 were done to resume tracking to all available GPS satellites.
	GRACE-D IPU reboot (spontaneous) at 00:34:10
	GRACE-D IPU reboot (commanded) at 01:05:30
	GRACE-C IPU reboot (commanded) at 01:11:20
2020-10-26	GPS PRN#24 was disabled in the IPU from 2020-10-26 13:00 to 2020-10-27 02:30 due to an announced period of unavailability.
2020-10-27	GRACE-D IPU reboot (commanded) at 02:32:30
	GRACE-C IPU reboot (commanded) at 02:38:00
	GRACE-D IPU reboot (spontaneous) at 02:46:40
	GRACE-C IPU reboot (spontaneous) at 02:57:50
	GRACE-C IPU reboot (spontaneous) at 13:48:20
2020-10-28	GPS PRN#27 was disabled in the IPU from 2020-10-28 12:00 to 2020-10-29 00:00 due to an announced period of unavailability.

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	GRACE-D A maximal number of tracked GPS satellites was increased to 11 in the IPU at 21:35.
2020-10-29	GRACE-D IPU reboot (commanded) at 00:02:30
	GRACE-C IPU reboot (commanded) at 00:08:00
	GRACE-C IPU reboot (spontaneous) at 23:34:50
	GPS PRN#17 was disabled in the IPU's from 2020-10-29 20:45 to 2020-10-30 10:15 due to an announced period of unavailability
2020-10-30	GRACE-D IPU reboot (commanded) at 10:30:30
	GRACE-C IPU reboot (commanded) at 10:34:30
	GRACE-D IPU reboot (spontaneous) at 23:03:00
	GRACE-C KBR MI occurred after 12:34:10. A RestartTracker command sent at 19:17 only temporarily resolved the issue.
2020-10-31	GRACE-C IPU soft restart at 20:35:50



2.A – Level-2 Product and Data Availability

JPL, GFZ & CSR

- Current Level-2 version: RL06
- All centers provide GSM solutions
 - Please check the Level-2 Release Notes for further details
- JPL and GFZ provide corresponding monthly de-aliasing models [GAA, GAB, GAC, GAD]; CSR provides [GAC, GAD].

Table 2: GRACE and GRACE-FO Level-2 product availability.

Level-2 (JPL)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002				1	2			3	4	5	6	7
2003	8	9	10	11	12		13	14	15	16	17	18
2004	19	20	21	22	23	24	25	26	27	28	29	30
2005	31	32	33	34	35	36	37	38	39	40	41	42
2006	43	44	45	46	47	48	49	50	51	52	53	54
2007	55	56	57	58	59	60	61	62	63	64	65	66
2008	67	68	69	70	71	72	73	74	75	76	77	78
2009	79	80	81	82	83	84	85	86	87	88	89	90
2010	91	92	93	94	95	96	97	98	99	100	101	102
2011		103	104	105	106		107	108	109	110	111	112
2012	113	114	115	116		117	118	119	120		121	122
2013	123	124		125	126	127	128		129	130	131	
2014	132		133	134	135	136		137	138	139	140	
2015	141	142	143	144	145		146	147	148			149
2016	150	151	152		153	154	155	156			157*	158*
2017	159*+		160*+	161*+	162*	163*+						
2018						1*+	2*+			3*+	4+	5+
2019	6+	7*+	8+	9+	10+	11+	12+	13+	14+	15+	16+	17+
2020	18*+	19*+	20+	21+	22+	23+	24+	25+	26+			

GRACE
 Level-2 products
 no Level-2 products available

GRACE-FO
 Level-2 products available

Current Level-2 Release: RL06

+ Level-2 products (with ACC transplant)
 * partial / overlapping cal-months

3.A – Level-3 Product and Data Availability

JPL, GFZ & CSR

- JPL provides Land (LND) and Ocean (OCN) global data grids for all three SDS centers (JPL, GFZ, CSR) via [PO.DAAC](#).

Table 3: GRACE and GRACE-FO Level-3 product availability

Level-2 (JPL)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002				1	2			3	4	5	6	7
2003	8	9	10	11	12		13	14	15	16	17	18
2004	19	20	21	22	23	24	25	26	27	28	29	30
2005	31	32	33	34	35	36	37	38	39	40	41	42
2006	43	44	45	46	47	48	49	50	51	52	53	54
2007	55	56	57	58	59	60	61	62	63	64	65	66
2008	67	68	69	70	71	72	73	74	75	76	77	78
2009	79	80	81	82	83	84	85	86	87	88	89	90
2010	91	92	93	94	95	96	97	98	99	100	101	102
2011		103	104	105	106		107	108	109	110	111	112
2012	113	114	115	116		117	118	119	120		121	122
2013	123	124		125	126	127	128		129	130	131	
2014	132		133	134	135	136		137	138	139	140	
2015	141	142	143	144	145		146	147	148			149
2016	150	151	152		153	154	155	156			157*+	158*+
2017	159*+		160*+	161*+	162*	163*+						
2018						1*+	2*+			3*+	4+	5+
2019	6+	7*+	8+	9+	10+	11+	12+	13+	14+	15+	16+	17+
2020	18*+	19*+	20+	21+	22+	23+	24+	25+	26+			

GRACE
 Level-3 products
 no Level-3 products available

GRACE-FO
 Level-3 products available

Current Level-2 Release: RL06

+ Level-3 products (with ACC transplant)
 * partial / overlapping calendar months