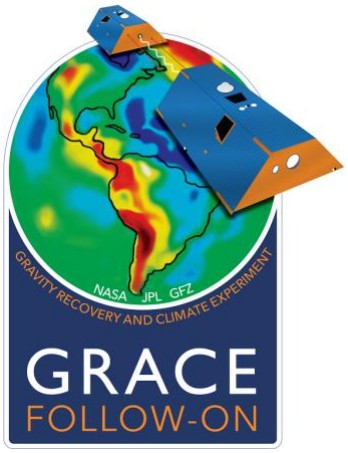

GRACE Follow-On

Science Data System Newsletter Report: April/May 2020 (No. 13)

Contact: gracefo@jpl.nasa.gov

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GRACE Follow-On Science Data System: Highlights & Updates

- **UPDATE on GRACE/GRACE-FO Science Team Meeting 2020:** due to the ongoing COVID-19 crisis and associated disruptions, the conventional layout for an in-person GSTM at GFZ (Potsdam) is not possible. Instead the Scientific Organizing Committee is planning for an online meeting (Oct 26-30, 2020). Information how the GSTM will be conducted is now available at https://www.gstm-2020.eu/. Abstract submission and registration will start on Monday, August 24th, 2020.
- 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 **June 2020.**
    Please see Level-1 Release Notes for updates to the LRI1A/B data processing.
  - **Level-2** data products through **May 2020.**
- The following SDS data products are available at NASA's Physical Oceanography Distributed Active Archive Center (PO.DAAC):
  - **Level-3** SDS data products through **May 2020.**
- GFZ has released an updated version 0002 of its RL06 Level-2B and Level-3 products, covering GRACE and GRACE-FO. More details incl. links to these products are provided at GFZ's GravIS portal (http://gravis.gfz-potsdam.de/).
- UT-CSR has released updated RL-06 version 02 Mascon solutions, covering GRACE and GRACE-FO. See http://www2.csr.utexas.edu/grace/RL06_mascons.html for details.
- 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:

- **GRACE/GRACE-FO Science Team Meeting (26-30 Oct 2020 – online event):**
  - Will be a virtual meeting; check https://www.gstm-2020.eu/ for information and announcements.
- **AGU Fall Meeting 2020 (1-17 Dec, 2020 – online event)**
  - **Abstract submission deadline: 2020-07-29!**
  - See https://www.agu.org/Fall-Meeting for session descriptions

GRACE Follow-On: Mission Status

GRACE Follow-On: Orbit

The GRACE Follow-On orbital parameters on 2020-05-11 (day 132) were as follows:

Sun Beta (deg)	16
Absolute Distance (km)	174.1
Drift (km/d)	-0.06
Mean Altitude (>6378.1 km)	490.5
Decay Rate (GF1/GF2) (7d mean, m/d)	1.4 / 1.4

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/s^2;
  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. 9) 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):

- 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

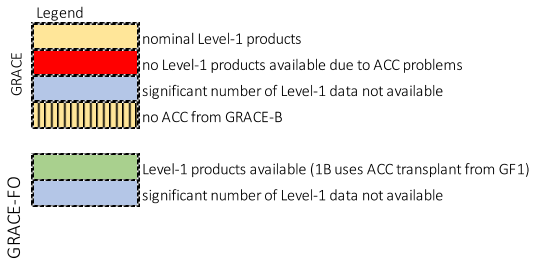
KBR1B_2020-04-01_Y_04.dat	24.0	17280	1.97	-8.5	6.3	1
KBR1B_2020-04-02_Y_04.dat	24.0	17280	2.40	-7.5	7.5	1
KBR1B_2020-04-03_Y_04.dat	24.0	17179	3.93	-12.4	26.9	2
KBR1B_2020-04-04_Y_04.dat	24.0	17280	2.39	-8.7	9.6	1
KBR1B_2020-04-05_Y_04.dat	24.0	17280	2.45	-8.9	9.3	1
KBR1B_2020-04-06_Y_04.dat	24.0	17280	2.37	-9.5	8.9	1
KBR1B_2020-04-07_Y_04.dat	24.0	17280	2.31	-16.5	6.9	1
KBR1B_2020-04-08_Y_04.dat	24.0	17280	2.48	-7.7	12.9	1
KBR1B_2020-04-09_Y_04.dat	24.0	17280	3.15	-14.5	17.8	1
KBR1B_2020-04-10_Y_04.dat	24.0	17280	3.04	-14.8	8.4	1
KBR1B_2020-04-11_Y_04.dat	24.0	17280	2.50	-8.0	15.0	1
KBR1B_2020-04-12_Y_04.dat	24.0	17280	2.48	-7.2	14.7	1
KBR1B_2020-04-13_Y_04.dat	24.0	17280	2.48	-10.6	8.1	1
KBR1B_2020-04-14_Y_04.dat	24.0	17142	2.54	-10.6	10.4	2
KBR1B_2020-04-15_Y_04.dat	24.0	17144	3.22	-10.6	9.3	2
KBR1B_2020-04-16_Y_04.dat	24.0	17280	2.63	-11.3	7.2	1
KBR1B_2020-04-17_Y_04.dat	24.0	17280	3.07	-13.7	8.2	1
KBR1B_2020-04-18_Y_04.dat	24.0	17280	2.33	-5.8	9.9	1
KBR1B_2020-04-19_Y_04.dat	24.0	17280	2.84	-8.4	8.2	1
KBR1B_2020-04-20_Y_04.dat	24.0	17280	2.87	-13.8	12.8	1
KBR1B_2020-04-21_Y_04.dat	24.0	17280	3.18	-19.8	8.4	1
KBR1B_2020-04-22_Y_04.dat	24.0	17280	2.35	-6.7	7.4	1
KBR1B_2020-04-23_Y_04.dat	24.0	17280	1.97	-8.0	5.3	1
KBR1B_2020-04-24_Y_04.dat	24.0	17212	2.70	-12.4	8.5	2
KBR1B_2020-04-25_Y_04.dat	24.0	17158	3.42	-10.8	19.8	2
KBR1B_2020-04-26_Y_04.dat	24.0	17280	2.16	-6.7	7.6	1
KBR1B_2020-04-27_Y_04.dat	24.0	17280	3.88	-12.5	23.0	1
KBR1B_2020-04-28_Y_04.dat	24.0	17280	3.17	-18.6	11.8	1
KBR1B_2020-04-29_Y_04.dat	24.0	17280	2.79	-11.0	9.3	1
KBR1B_2020-04-30_Y_04.dat	24.0	17280	2.67	-11.2	10.8	1
KBR1B_2020-05-01_Y_04.dat	24.0	17199	10.68	-20.0	100.4	2
KBR1B_2020-05-02_Y_04.dat	24.0	17280	2.52	-11.1	11.7	1
KBR1B_2020-05-03_Y_04.dat	24.0	17280	3.39	-10.7	20.8	1
KBR1B_2020-05-04_Y_04.dat	24.0	17201	3.37	-10.5	13.5	2
KBR1B_2020-05-05_Y_04.dat	24.0	17280	2.90	-11.5	7.6	1
KBR1B_2020-05-06_Y_04.dat	24.0	17280	2.28	-8.6	7.7	1
KBR1B_2020-05-07_Y_04.dat	24.0	17280	2.27	-7.9	8.3	1
KBR1B_2020-05-08_Y_04.dat	24.0	17163	2.58	-11.2	11.9	2
KBR1B_2020-05-09_Y_04.dat	24.0	17280	2.85	-9.6	14.2	1
KBR1B_2020-05-10_Y_04.dat	24.0	17280	2.46	-10.1	8.8	1
KBR1B_2020-05-11_Y_04.dat	24.0	17280	2.15	-7.8	8.4	1
KBR1B_2020-05-12_Y_04.dat	24.0	17280	3.07	-16.6	13.0	1
KBR1B_2020-05-13_Y_04.dat	24.0	17280	2.53	-8.5	11.2	1
KBR1B_2020-05-14_Y_04.dat	24.0	17280	2.77	-11.6	12.3	1
KBR1B_2020-05-15_Y_04.dat	24.0	17213	2.57	-13.3	7.9	2

KBR1B_2020-05-16_Y_04.dat	24.0	17175	2.70	-11.9	8.5	2
KBR1B_2020-05-17_Y_04.dat	24.0	17280	2.81	-10.1	14.6	1
KBR1B_2020-05-18_Y_04.dat	24.0	17280	2.61	-9.5	8.3	1
KBR1B_2020-05-19_Y_04.dat	24.0	17280	3.76	-21.1	12.0	1
KBR1B_2020-05-20_Y_04.dat	24.0	17280	3.00	-8.3	16.0	1
KBR1B_2020-05-21_Y_04.dat	24.0	17280	2.48	-7.8	11.8	1
KBR1B_2020-05-22_Y_04.dat	24.0	17104	4.91	-25.3	12.1	2
KBR1B_2020-05-23_Y_04.dat	24.0	17280	3.49	-14.1	11.2	1
KBR1B_2020-05-24_Y_04.dat	24.0	17280	3.70	-24.8	13.8	1
KBR1B_2020-05-25_Y_04.dat	24.0	17280	4.34	-29.0	10.4	1
KBR1B_2020-05-26_Y_04.dat	24.0	17280	2.83	-10.2	13.8	1
KBR1B_2020-05-27_Y_04.dat	24.0	17003	5.23	-38.9	14.0	11
KBR1B_2020-05-28_Y_04.dat	24.0	17221	3.77	-28.3	13.0	4
KBR1B_2020-05-29_Y_04.dat	24.0	17010	2.81	-16.0	12.7	1
KBR1B_2020-05-30_Y_04.dat	24.0	17280	4.12	-12.2	23.3	1
KBR1B_2020-05-31_Y_04.dat	24.0	17280	2.85	-11.7	13.8	1
KBR1B_2020-06-01_Y_04.dat	24.0	17280	2.84	-11.0	17.5	1
KBR1B_2020-06-02_Y_04.dat	24.0	17141	4.95	-13.5	38.6	2
KBR1B_2020-06-03_Y_04.dat	24.0	16661	2.52	-11.3	10.6	10
KBR1B_2020-06-04_Y_04.dat	24.0	17016	2.71	-12.0	13.0	1
KBR1B_2020-06-05_Y_04.dat	24.0	17280	4.55	-6.9	30.5	1
KBR1B_2020-06-06_Y_04.dat	24.0	17280	2.07	-10.3	6.1	1
KBR1B_2020-06-07_Y_04.dat	24.0	17280	4.06	-20.1	10.7	1
KBR1B_2020-06-08_Y_04.dat	24.0	17280	3.04	-12.4	14.4	1
KBR1B_2020-06-09_Y_04.dat	24.0	17165	2.93	-9.0	13.5	2
KBR1B_2020-06-10_Y_04.dat	24.0	17280	2.53	-10.7	7.6	1
KBR1B_2020-06-11_Y_04.dat	24.0	17280	2.56	-10.2	7.6	1
KBR1B_2020-06-12_Y_04.dat	24.0	17280	2.77	-10.2	18.4	1
KBR1B_2020-06-13_Y_04.dat	24.0	17280	4.22	-12.3	21.1	1
KBR1B_2020-06-14_Y_04.dat	24.0	17280	2.52	-11.3	8.1	1
KBR1B_2020-06-15_Y_04.dat	24.0	17280	2.88	-16.0	8.8	1
KBR1B_2020-06-16_Y_04.dat	24.0	17280	4.13	-22.5	17.4	1
KBR1B_2020-06-17_Y_04.dat	24.0	17280	5.34	-12.2	38.8	1
KBR1B_2020-06-18_Y_04.dat	24.0	17280	4.45	-18.1	35.2	1
KBR1B_2020-06-19_Y_04.dat	24.0	17183	4.95	-20.3	33.3	2
KBR1B_2020-06-20_Y_04.dat	24.0	17163	2.73	-15.6	9.4	2
KBR1B_2020-06-21_Y_04.dat	24.0	17280	3.16	-12.4	15.4	1
KBR1B_2020-06-22_Y_04.dat	24.0	17280	2.82	-9.4	14.6	1
KBR1B_2020-06-23_Y_04.dat	24.0	17280	2.93	-9.7	14.1	1
KBR1B_2020-06-24_Y_04.dat	24.0	17280	2.20	-5.2	8.6	1
KBR1B_2020-06-25_Y_04.dat	24.0	17280	3.53	-15.9	21.4	1
KBR1B_2020-06-26_Y_04.dat	24.0	16976	2.56	-9.9	7.6	4
KBR1B_2020-06-27_Y_04.dat	24.0	17218	4.56	-28.1	14.3	4
KBR1B_2020-06-28_Y_04.dat	24.0	17280	4.17	-10.9	24.4	1
KBR1B_2020-06-29_Y_04.dat	24.0	17280	3.14	-11.6	11.7	1
KBR1B_2020-06-30_Y_04.dat	24.0	17280	3.11	-18.1	10.1	1

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

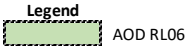
Table 1: Current version: Level-1 v04.

Level-1 A/B	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002												
2003												
2004												
2005												
2006												
2007												
2008												
2009												
2010												
2011												
2012												
2013												
2014												
2015												
2016												
2017												
2018												
2019												
2020												



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

AOD1B	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1976												
1980												
…												
2017												
2018												
2019												
2020												



- 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:

2020-03-05	C: At 08:54 radio occultation measurements were enabled in the IPU. At 09:30 GPS PRN#1 was disabled in the IPU for 12h (in order to test the new IPU S/W). At 12:15 OBCP_14 was enabled.
2020-03-04	CD: (through 2020-03-05) KBR1B may be degraded due to thermal effects by turning off the heaters/MWI about 13 hours.
2020-03-03	CD: At 22:57 the inter-satellite link (KBR, LRI) was lost after GF1 switched to AOCS Safe Mode.
2020-03-04	CD: At 13:29 the MWI link was resumed. At 14:14 the LRI link was resumed.
2020-03-08	C: LRI was short period in Reacquisition Mode due to LRI reboot on GF2
2020-03-10	C: At 10:05 the IPU was restarted on MWI request
2020-03-08	D: A spontaneous reboot of the LRI was experienced at 02:47
2020-03-09	CD: GPS PRN#23 was disabled in the IPUs at 14:00 after it was announced unusable until further notice.
2020-03-18	C: IPU reboot at 00:10:30

2020-03-14	D: IPU reboot at 13:25:20 and 13:48:50
2020-03-19	D: IPU reboot at 23:34:40
2020-03-13	LRI mega phase jumps on: Mar (13,14,16,17,18)
2020-03-26	D: IPU reboot at 01:01:07
2020-04-03	C: IPU reboot at 21:20:40
2020-04-15	C: IPU reboot at 07:10:30
2020-04-14	D: IPU reboot at 10:58:10
2020-04-25	C: IPU reboot at 15:09:10
2020-04-24	D: IPU reboot at 10:38:40; GPS data of Channel 22 were removed from 2020-04-27 21:22:00 through 2020-04-30 24:00:00
2020-05-09	C: CMCal Center-of-Mass calibrations maneuver; Yaw: 10:26, 12:01; Pitch: 13:49, 15:23, 21:28; Roll: 16:58, 18:33
2020-05-14	C: At 08:38 the Mass Trim Electronics (MTE-A) was switched on. At 08:42 the trim mass was moved in -z direction by 1544 steps (i.e. -3.86 mm) for a change in the center of mass of -32.0 µm. The MTE-A was switched off at 08:50.
2020-05-08	D: IPU reboot at 14:14:40
2020-05-11	CD: ~ 2020-05-14 GPS data were processed with extra editing due to the Flex power.
2020-05-14	CD: The LRI collected diagnostic data during the mass trim on GF1. Both instruments were commanded to diagnostic mode at 8:30 and back to auto acquisition mode at 9:30 resuming LRI science mode.
2020-05-15	C: Center-of-Mass Calibrations (CMCal) were performed to verify the recent mass trim movement. CMCal maneuvers executed: Yaw: 21:28, 23:03
2020-05-16	C: Center-of-Mass Calibrations (CMCal); CMCal maneuvers executed: Roll: 01:47, 03:21, Pitch: 04:56, "06:30, 08:30 IPU" reboot at 13:03:20 over North Pole.
2020-05-15	GRACE-D IPU reboot at 03:47:40
2020-05-15	CD: GPS PRN#18 was re-enabled in the IPUs
2020-05-27	C: IPU reboot at 04:09:20; KBR MI occurred after 5:00. K/Ka Band tracker restarted at 15:05.
2020-05-28	KBR MI occurred shortly after the K/Ka Band tracker was restarted yesterday. K/Ka Band tracker restarted at 03:59
2020-05-22	CD: GPS PRN#22 is disabled in the IPUs (03:30 - 17:00) due to an announced period of unavailability
2020-05-28	CD: GPS PRN#25 is disabled in the IPUs (11:25 - 23:25) due to an announced period of unavailability.
2020-06-02	C: The Star Tracker quaternions for trackers 2 & 3 were updated at 16:01. This is to enable smoother transitions between star trackers. IPU reboot at 16:39 0
2020-06-03	C: The LRI parameter load was completed at 14:08. The IPU experienced back to back spontaneous reboots at 00:38:00 & 00:47:40. Following the second reboot, a Missed Interrupt was observed. A restart tracker command was issued at 11:07, which cured the issue.
2020-06-04	D: The IPU experienced a spontaneous reboot at 00:18:10.

2020-06-02	D: The ACC was transitioned to Nominal Range Mode (NRM) at 13:53.
2020-06-09	C: IPU reboot 23:33:20
2020-06-18	The LRI parameter file upload was performed today: at 08:00 LRI was commanded to Diagnostic Mode, at 13:00 LRI was rebooted with new parameter files, at 13:25 LRI was back in Science Mode.
2020-06-19	C: IPU reboot at 03:30:22
2020-06-24	C: test MWI calibration maneuver (wiggle test) was performed:At 13:57 attitude pitch bias was set to-2deg At 14:02 two cycles (250sec length) of sinusoidal oscillation along pitch axis were performed.
2020-06-19	D: IPU reboot at 03:30:26
2020-06-20	D: IPU reboot at 03:20:20
2020-06-19	CD: GPS PRN 01 was re-enabled in the IPUs at 03:25
2020-06-26	CD: IPU reboot at 17:25:40
2020-06-26	D: IPU reboot at 17:32:50 KBR MI occurred on 2020-06-26 after 21:00. K/Ka Band tacker was restarted on 2020-06-27 at 02:40.

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+							

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+							

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 cal-months