2023 GRACE-FO Science Team Meeting

Oct 16-18, 2023
Boulder, CO, U.S.A.
gfostm_2023@jpl.nasa.gov
https://cpaess.ucar.edu/meetings/grace-fo-2023-science-team-meeting

Meeting Information & Schedule

Oct-15, 2023

Meeting dates / times & Zoom links

- Day 1: Oct-16 from 9:00am - 5:00pm (MDT)
  - *Zoom* link will be sent separately
- Day 2: Oct-17 from 9:00am - 5:00pm (MDT)
  - *Zoom* link will be sent separately
- Day 3: Oct-18 from 9:00am - 3:00pm (MDT)
  - *Zoom* link will be sent separately

Presentation upload - there are two options:

1. Filename: [*Abstract_number_LastName_gfostm_2023]*; see table below for abstract number.
2. Option 1: Email your presentation file (ppt preferred, pdf possible, Keynote discouraged) to gfostm_2023@jpl.nasa.gov (file size limit: 20 MB).
3. Option 2: If your file is larger than 20MB, please email us a file-share link (e.g., dropbox, GoogleDrive etc.) from which we can download the file.
4. Please verify point 1.

Note:

- You will be able to update your presentation file before the meeting - but the sooner you send us your final version, the better - thanks!
- Due to security restrictions, it is not possible to share files via USB sticks.

For interactive & offline discussions, we have set up a dedicated ***Slack*** channel (link will be shared before the meeting).

Questions?

To contact the scientific organizing committee:

gfostm_2023@jpl.nasa.gov

To contact the local organizing committee:

jessicam@ucar.edu (Jessica Martinez)

Session Key:

A.1 GRACE & GRACE-FO Geodesy: GRACE-FO Project Status
A.2 GRACE & GRACE-FO Geodesy: Analysis Techniques & Inter-comparisons
B.2 Geophysics & Climate Science Applications: Cryosphere
B.3 Geophysics & Climate Science Applications: Oceanography
A.3 GRACE & GRACE-FO Geodesy: NGGM and Bridging the Gap
B.1 Geophysics & Climate Science Applications: Solid Earth Sciences
B.4 Geophysics & Climate Science Applications: Hydrology
B.5 Geophysics & Climate Science Applications: Multidisciplinary Science

Schedule

Abstract Number	Start time [MDT]	Start time [CET]	Abstract title	Presenter	Session
Day 1					
	09:00	17:00	Welcome & Opening Remarks	Flechtner / Tsaoussi / Landerer	A1
1	09:05	17:05	GRACE-FO: science results, project status and plans into the extended mission phase	Landerer	A1
2	09:30	17:30	MOS Status	Witkowski	A1
3	09:40	17:40	Science Operations Management (SOM) Report	Save	A1
5	09:55	17:55	GRACE and GRACE-FO Level-1 Data Processing Status & Outlook	Mccullough	A1
4	10:10	18:10	AOD1B RL07	Shihora	A1
	10:25	18:25	Coffee Break / Posters		
6	10:45	18:45	SDS Level-2 /-3 GFZ	Dahle	A1
7	11:00	19:00	CSR Level-2 / Level-3 report	Pie	A1
8	11:15	19:15	JPL GRACE and GRACE-FO Level-2 Overview	Wiese	A1
	11:30	19:30	SLR / TN-14 updates	Loomis	A1
	11:35	19:35	Q & A (SOM; L1, 2, 3) / discussion		A1
	12:10	20:10	Lunch		
9	13:15	21:15	Progress of GRACE / GRACE-FO Level 2 processing at LUH and outlook for NGGM/MAGIC sensor system analysis	Flury	A2
10	13:30	21:30	Updated processing strategy of GFZ's GRACE/GRACE-FO Level-2 monthly gravity field time series	Hauk	A2

11	13:45	21:45	Preliminary GRACE RL07 re-processing result	Zhang	A2
12	14:00	22:00	Impact of GRACE and GRACE-FO analysis techniques on spatial and temporal patterns of estimated mass change	McGirr	A2
13	14:15	22:15	Relationship Between Geographically Correlated Gravity Field Errors and Estimated Satellite Trajectories	Childress	A2
14	14:30	22:30	JPL's GRACE/GRACE-FO Dynamic Orbits: Open Discussion on Level 1C products	Peidou	A2
	14:45	22:45	Coffee Break / Posters		
15	15:15	23:15	New in situ measurements of ocean bottom pressure at the North Pole since summer 2022: The first year of data and comparisons with GRACE-FO products	Peralta-Ferriz	A2
16	15:30	23:30	Improved de-aliasing capabilities of the MAGIC double-pair constellation	Wilms	A2
17	15:45	23:45	Data Fusion of Satellite Gravimetry and Altimetry: Improving Spatial Resolution of Antarctic Mass Change	Wiese	A2
18	16:00	00:00	GSFC SLR solution updates and methods to assess GRACE/GRACE-FO accuracy	Loomis	A2
19	16:15	00:15	Geocenter motion determination from SLR data, GRACE/GRACE-FO, ocean and atmospheric models	Kang	A2
19.1	16:30	00:30	Simulation Analysis of GRACE and SLR Combination Solutions	Tucker	A2
	16:45	00:45	Q & A (L-2/3)		A2
	17:15	01:15	Reception / Dinner at UCAR Center Green		

Day 2					
20	09:00	17:00	CNES/GRGS L2 and L3 GRACE/GRACE-FO products	Lemoine	A2
21	09:15	17:15	The use of SVD in gravity field inversion at CNES/GRGS	Bourgogne	A2
22	09:30	17:30	Residual Pattern in LRI post-fit range-rate residuals	Duwe	A2

23	09:45	17:45	Improving Antarctic Mass Balance Estimate by Combining Satellites, GPS, and Other Data	Liang	B2
24	10:00	18:00	Deceleration of Antarctic mass loss and contributions to sea level during the GRACE-FO era	McGirr	B2
25	10:15	18:15	Investigating differences in estimates of ice sheet mass change from GRACE-FO and ICESat-2	Croteau	B2
	10:30	18:30	Coffee Break / Posters		
26	10:45	18:45	Ice sheet mass balance estimates from standard GRACE/GRACE-FO product and improved estimates using Laser Ranging Interferometer (LRI) data	Velicogna	B2
27	11:00	19:00	The Half-Century Record of Changes in the Earth's Oblateness from Satellite Laser Ranging: What is it telling us?	Nerem	B2
28	11:15	19:15	Observing Deep Ocean Components of Overturning Circulation with GRACE and GRACE-FO	Meyer	B3
29	11:30	19:30	GRACE and GRACE-FO Mascons for Studying Ocean Dynamics	Chambers	B3
30	11:45	19:45	Ocean mass redistribution and Regional Sea-Level Rise in the NW Pacific Marginal Seas	Song	B3
31	12:00	20:00	Errors in ECMWF atmospheric tides and how they affect the AOD fields	Ray	B3
	12:15	20:15	Lunch		
32	13:30	21:30	How well do we know the seasonal cycle in ocean bottom pressure?	Ponte	B3
33	13:45	21:45	Continuing mass change observations beyond GRACE-FO: status update on the development of the next US/German pair of satellites	Wiese	A3
34	14:00	22:00	Optomechanical inertial sensors and some applications to Earth science	Guzman	A3
35	14:15	22:15	Predictive Modelling and Gap Filling for GRACE Satellite Data Using LSTM Networks	Darbeheshti	A3
36	14:30	22:30	Scale factor measurement for Mass Change Mission: Prototype development and performance	Rees	A3

37	14:45	22:45	Reappraisal and geopotential modelling of the great (Mw ≥8.0) earthquakes during the GRACE and GRACE Follow-On era	Han	B1
	15:00	23:00	Coffee Break / Posters		
38	15:30	23:30	Estimating and Removing Major Earthquake Signals from the CSR Mascons	Bonin	B1
39	15:45	23:45	5.7 year variation in C22/S22 from SLR and GRACE/GRACE-FO	Cheng	B1
40	16:00	00:00	Mantle anelasticity and Level-3 equivalent water height solutions	Caron	B1
41	16:15	00:15	Application of Cyclostationary Empirical Orthogonal Function Analysis to Satellite Record of Terrestrial Water Storage	Hamlington	B4
42	16:30	00:30	Why Did Sub-Polar Terrestrial Water Storage Suddenly Decline in 2015?	Rodell	B4
43	16:45	00:45	The big melt: using GRACE-FO to measure California groundwater recharge after a record-breaking winter	Reager	B4

Day 3					
44	09:00	17:00	The monitoring of hydrological change in the Alpine region by investigating the use of satellite gravimetry data	Liu	B4
45	09:15	17:15	A copula-supported Bayesian framework for spatial downscaling of GRACE-derived terrestrial water storage flux	Tourian	B4
46	09:30	17:30	New Insights into the Seasonal Total Water Storage Variations in California from GRACE/GRACE-FO and GNSS	Ghobadi-Far	B4
47	09:45	17:45	Inferring change in subsurface water by integrating GPS mass change estimates, snow models, and lake water change	Argus	B4
48	10:00	18:00	Accelerated groundwater loss in northern Italy as observed by GRACE, well measurements, and vertical land motion	Carlson	B4
49	10:15	18:15	Fusing global total water storage variations from	Werth	B4

			GRACE and hydrological models		
	10:30	18:30	Coffee Break / Posters		
50	10:50	18:50	Deciphering the Role of Total Water Storage Anomalies in Mediating Regional Flooding	Sun	B4
51	11:05	19:05	Monitoring Artificial Reservoirs from a Distance	Sultan	B4
52	11:20	19:20	Tropical cyclone contribution to groundwater recharge in Southern Arabia	Saleh	B4
53	11:35	19:35	Exploiting the IGG_SLR_Hybrid Solution to Determine Gravimetric Excitations of Polar Motion	Nastula	B5
54	11:50	19:50	Resolving the discrepancy between the seasonal oscillation of Earth's fluid envelope estimated with SLR and that assumed in GRACE	Argus	B5
	12:10	20:10	Lunch		
55	13:20	21:20	Impacts of GIA Modeling Uncertainties on the Closure of the GMSL Budget	Bellas-Manley	B5
56	13:45	21:45	Global ocean heat content and Earth Energy imbalance from space geodetic observations	Blazquez	B5
57	14:00	22:00	Earth’s Energy Imbalance from the geodetic ocean perspective	Landerer	B5
	14:15	22:15	Discussion / Summary		
	14:45	22:45	Coffee / Adjourn		