**GSTM-2014 Program**

**Monday, Sep. 29**

08:00  Registration

*Welcome and GRACE SDS status reports*

_Convener: Frank Flechtner_

09:00  1  Frank Flechtner  
_Welcome_

09:15  2  Byron Tapley  
_GRACE Mission Status_

09:35  3  Mona Witkowski  
_Status of GRACE Satellites and Instruments_

09:55  4  Gerhard Kruizinga  
_JPL Level-1 Status_

10:15  5  Srinivas Bettadpur  
_CSR Level-2 Status_

10:45  6  Michael Watkins  
_JPL Level-2 Status_

11:00  7  Christoph Dahle  
_GFZ Level-2 Status_

11:15  Coffee Break
**Session B.1: Multidisciplinary Science**

**Convener:** Matthias Weigelt

12:15  1  Xiaoping Wu

*Presented by:* Xiaoping Wu

*Accelerations in Surface Mass Transport – A Global Reassessment*


*Presented by:* Martin Horwath

*The glacial-isostatic adjustment signature in Antarctica inferred from GRACE, Envisat/ICESat and GPS (ESA-STSE project REGINA).*

12:45  3  Erik R. Ivins, David Wiese, Michael Watkins, Felix Landerer, Alexander Simms, Dah-Ning Yuan, Carmen Boening, Eugene Domack

*Presented by:* Erik R. Ivins

*Glacial Isostasy and Mass balance of Graham Land and the greater Antarctic Peninsula 2002-2014 and over the past 150 years using GRACE and GNSS station data*

13:00  4  Jolanta Nastula, Małgorzata Wińska, Monika Biryło

*Presented by:* Jolanta Nastula

*Comparison of polar motion excitation functions computed from different sets of gravimetric coefficients*

Poster  20  M. Srinivasan, E. Ivins, M. Jasinski, J. Famiglietti, M. Rodell

*Presented by:* Margaret Srinivasan

*Developing a Comprehensive GRACE Applications Strategy*

13:15  Lunch
Session B.4: Hydrology

Convener: Matt Rodell/Andreas Güntner

14:15  1 Matthew Rodell
Presented by: Matthew Rodell

*Hydrological Extremes in the GRACE Record*

14:30  2 Sarah Elizabeth McCandless, Srinivas Bettadpur, Teresa Howard, Gordon Wells
Presented by: Srinivas Bettadpur

*Utilizing GRACE TWS, NDVI, and Precipitation for Drought Identification and Classification in Texas*

14:45  3 Mohamed Ahmed, Mohamed Sultan, John Wahr, Ahmed Mohamed, Eugene Yan
Presented by: Mohamed Ahmed

*Quantifying recharge and depletion rates of the Nubian Sandstone Aquifer System: An integrated approach*

15:00  4 Carmen Boening, Marie-Estelle Demory, David Wiese, Pier Luigi Vidale, Malcolm Roberts, Reinhard Schiemann, Matthew Mizielinski, Michael M. Watkins
Presented by: Carmen Boening

*The use of GRACE satellite data to validate the global hydrological cycle as simulated by a global climate model*

15:15  5 Annette Eicker, Maike Schumacher, Jürgen Kusche, Hannes Müller Schmied, Petra Döll
Presented by: Annette Eicker

*Calibration/data assimilation approach for WGHM using gridded GRACE observations*

15:30  6 Liangjing Zhang, Henryk Dobslaw
Presented by: Liangjing Zhang

*Validation of MPI-ESM Decadal Hindcast Experiments with Terrestrial Water Storage Variations as Observed by GRACE*

15:45  Coffee Break
16:15  7  Akbar Shabanloui, Jürgen Müller  
Presented by:  Jürgen Müller  
Assimilation of GRACE, satellite altimetry and hydrological data for determining mass variations in the Siberian permafrost region

16:30  8  Mohamed Sultan, Mohamed Ahmed, John Wahr, Eugene Yan  
Presented by:  Mohamed Sultan  
Assessing the performance of land surface models over Africa using GRACE and remote sensing data

Presented by:  J. Kusche  
Synergies between GRACE and regional atmospheric modeling efforts

17:00  10  J. Huang, G. Pavlic, A. Rivera  
Presented by:  Jianliang Huang  
How well can synoptic groundwater storage variation be mapped from GRACE? - A case study in Alberta, Canada

Poster  20  Leonid Zotov, Viktor Yushkin, Jaakko Makinen, Mirjam Bilker-Koivula,  
Presented by:  L. Zotov  
Mass changes over Russia from GRACE and absolute gravimetry

17:15  Poster Session

18:30 - 20:30  Social Event
**Tuesday, Sep. 30**

*Session A1: Analysis Techniques  Inter-comparisons*

*Convener: Srinivas Bettadpur/Jürgen Kusche*

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<tr>
<th>Time</th>
<th>Presenters</th>
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<tr>
<td>08:45</td>
<td>Ulrich Meyer, Adrian Jäggi</td>
<td><strong>AIUB-RL02 monthly gravity field solutions from GRACE kinematic orbits and range rate observations</strong></td>
<td>Ulrich Meyer</td>
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<tr>
<td>09:00</td>
<td>Jean-Michel Lemoine, Sean Bruinsma, Pascal Gégout, Richard Biancale, Stéphane Bourgogne</td>
<td><strong>Release 3 of the GRACE gravity solutions from CNES/GRGS</strong></td>
<td>Jean-Michel Lemoine</td>
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<tr>
<td>09:15</td>
<td>B. Loomis, S.B. Luthcke, T. Sabaka</td>
<td><strong>Progress towards the next generation of GSFC global mascons</strong></td>
<td>B. Loomis</td>
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<tr>
<td>09:30</td>
<td>Beate Klinger, Torsten Mayer-Gürr</td>
<td><strong>Combination of GRACE star camera and angular acceleration data: impact on monthly gravity field models</strong></td>
<td>Beate Klinger</td>
</tr>
</tbody>
</table>
09:45  6  Peter L. Bender, Frank G. Lemoine, Scott B. Luthcke  
Presented by:  Peter L. Bender  
*Progress Toward Development of a Four Revolution Empirical Correction Procedure for GRACE Type Missions*

10:00  7  A. Horvath, M. Murböck, R. Pail, M. Horwath  
Presented by:  Alexander Horvath  
*Mass signals from GRACE gravity fields with dedicated filtering using full covariance information*

10:15  8  Jiangjun Ran, Pavel Ditmar, Roland Klees  
Presented by:  Jiangjun Ran  
*Improved post-processing of GRACE monthly gravity fields to estimate regional mass variations of the Greenland Ice Sheet*

10:30  Coffee Break

11:00  9  Christian Gruber, Andreas Groh, Christoph Dahle, Elisa Fagiolini  
Presented by:  Christian Gruber  
*Evaluation of global and regional GRACE solutions*

11:15  10  Y. Sun, P. Ditmar, R. Riccardo  
Presented by:  Y. Sun  
*Determination of changes in the Earth’s dynamic oblateness from GRACE, an ocean bottom pressure model and a glacial isostatic adjustment model*

11:30  11  Na Wei, Tonie van Dam, Matthias Weigelt, Thierry Meyrath  
Presented by:  Na Wei  
*Seasonal Variations of Low-degree Spherical Harmonic Derived from GPS Data and Loading Models*
Session A.2: GRACE Follow-On NGGM

Convener: Mike Watkins / Frank Flechtner

12:00  1  Mike Watkins, Frank Flechtner, Phil Morton, Frank Webb, Franz-Heinrich Massmann, Ludwig Grunwaldt

**Presented by:** Mike Watkins

*Status of the GRACE Follow-On Mission*

12:15  2  Bernard Foulon, Bruno Christophe, Vincent Lebat, Damien Boulanger, Francoise Liorzou

**Presented by:** Bruno Christophe

*Development status of the GRACE Follow-On accelerometer and first results of the Engineering Model testing*

12:30  3  Christina Bogan for the LRI team

**Presented by:** Christina Bogan

*The Laser Ranging interferometer for GRACE Follow On - current status*
12:45  4  Srinivas Bettadpur, Christopher McCullough, John Ries, Minkang Cheng  
**Presented by:**  Srinivas Bettadpur  
*Use of GNSS and SLR tracking of LEO satellites for bridging between GRACE and GRACE-FO*

**Presented by:**  Matthias Weigelt  
*How well can the combination hISST and SLR replace GRACE? A discussion from the point of view of applications*

13:15  Lunch

**Presented by:**  Krzysztof Sośnica  
*Time varying gravity from SLR and combined SLR and high-low satellite-to-satellite tracking data*

14:30  7  Norbert Zehentner, Torsten Mayer-Gürr, Matthias Weigelt, Adrian Jäggi  
**Presented by:**  Norbert Zehentner  
*Non-dedicated satellite missions for time variable gravity field estimation*

14:45  8  Christian Siemes, Olivier Carraz, Luca Massotti, Roger Haagmans, Pierluigi Silvestrin  
**Presented by:**  Christian Siemes  
*ESA’s Activities related to Next Generation Gravity Mission Concepts*

15:00  9  R. Pail, R. Bingham, C. Braitenberg, A. Eicker, R. Floberghagen, R. Haagmans, M. Horwath, T.J. Johnson, L. Longuevergne, I. Panet, C. Rolstad-Denby, B. Wouters  
**Presented by:**  Roland Pail  
*Consolidated science requirements for a next generation gravity field mission*
15:15  10  M. Murböck, Th. Gruber and NGGM-D team

Presented by:  T. Gruber

*Next generation satellite gravimetry mission study (NGGM-D)*


Presented by:  Ilias Daras

*Treatment of temporal aliasing on future gravity satellite missions - an insight into ESA-SC4MGV project*


Presented by:  Matthias Weigelt

*A methodology to choose the orbit for a double pair scenario future gravity satellite mission? experiences from the ESA SC4MGV project*

Poster  20  Ilias Daras, Roland Pail

Presented by:  Ilias Daras

*Towards a full exploitation of next generation sensors on-board future LL-SST type gravity field missions*

Poster  21  Henryk Dobslaw, Inga Bergmann-Wolf, Robert Dill, Ehsan Forootan, Volker Klemann, Jürgen Kusche, Ingo Sasgen

Presented by:  Henryk Dobslaw

*The Updated ESA Earth System Model for Gravity Mission Simulation Studies*

Poster  22  Matthias Ellmer, Torsten Mayer-Gürr

Presented by:  Matthias Ellmer

*GRACE follow-on sensor noise with realistic background models*
**Session B.2: Cryosphere**

**Convener: Isabella Velicogna**

16:30  1  Jianli Chen  
**Presented by:** Jianli Chen  
*Reducing Leakage Error in GRACE-Estimated Antarctic Mass Balance*

16:45  2  Jennifer Bonin, Don Chambers, Himanshu Save  
**Presented by:** Jennifer Bonin  
*What GRACE resolution is required to numerically separate Greenland's glacial mass balance from its surface mass balance?*

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**Poster 23**  Bernard Foulon, Bruno Christophe, Francoise Liorzou  
**Presented by:** Bernard Foulon  
*MICROSTAR, a "miniaturized" ultra sensitive accelerometer for future space missions*

**Poster 24**  Bernard Foulon, Bruno Christophe, Vincent Lebat, Karim Douch, Isabelle Panet  
**Presented by:** Bernard Foulon  
*GREMLIT: a planar electrostatic gradiometer for airborne geodesy*

**Poster 25**  Vitali Müller for the LRI-D team  
**Presented by:** Vitali Müller  
*Inter-satellite ranging for GRACE Follow-On and NGGM*

16:00  **Coffee Break**
17:00  3  S.B. Luthcke, B. Loomis, T. Sabaka
Presented by:  S.B. Luthcke

*Current estimates of land ice mass evolution from the NASA GSFC mascon solution*

17:15  4  M. J. Talpe, R. S. Nerem, F. G. Lemoine, F. Landerer
Presented by:  R. S. Nerem

*Two Decades of Mass Change in Greenland and Antarctica*

17:30  5  Isabella Velicogna
Presented by:  Isabella velicogna

*Regional pattern of ice mass balance with GRACE in Greenland, Antarctica and the Canadian Arctic Archipelago*

17:45  6  Yvonne Firing, Carmen Boening, David Wiese, Michael Watkins, Nicole Schlegel, Eric Larour
Presented by:  Carmen Boening

*Antarctic Ice Mass Balance from GRACE*
# Wednesday, Oct. 01

**Session B.3: Oceanography**  
Convener: Victor Zlotnicki/Jens Schröter

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<tr>
<td>08:30</td>
<td>Christopher G. Piecuch, Rui M. Ponte</td>
<td>Annual Cycle in Southern Tropical Indian Ocean Bottom Pressure</td>
<td>Rui M. Ponte</td>
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<tr>
<td>08:45</td>
<td>Rui M. Ponte, Christopher G. Piecuch</td>
<td>Interannual Bottom Pressure Signals in the Australian-Antarctic and Bellingshausen Basins</td>
<td>Rui M. Ponte</td>
</tr>
<tr>
<td>09:00</td>
<td>B. Uebbing, J. Kusche, R. Rietbroek, C.K. Shum, Z.H. Khan</td>
<td>Partitioning Regional Sea Level in the Bay of Bengal from a Global GRACE and Jason-1/-2 Joint Inversion</td>
<td>J. Kusche</td>
</tr>
<tr>
<td>09:15</td>
<td>Jessica Makowski, Don P. Chambers, Jennifer Bonin</td>
<td>Using GRACE Ocean Bottom Pressure to Observe Mass Transport of the Antarctic Circumpolar Current</td>
<td>Jessica Makowski</td>
</tr>
<tr>
<td>09:30</td>
<td>S.-C. Han, R. Ray</td>
<td>High-frequency (20 - 60 days) ocean mass variation over the Argentine basin observed from GRACE satellite gravity</td>
<td>R. Ray</td>
</tr>
</tbody>
</table>
10:00 7 C. G. Piecuch, I. Fukumori, R. M. Ponte, O. Wang
Presented by: Ichiro Fukumori

Vertical Structure of Ocean Pressure Variations with Application to Satellite-Gravimetric Observations

10:15 8 Katrin Bentel, Felix W. Landerer, Carmen Boening
Presented by: Katrin Bentel

Monitoring Atlantic overturning circulation variability with GRACE-type gravity observations

10:30 Coffee Break

11:00 9 W. Llovel, J.K. Willis, F.W. Landerer, I. Fukumori
Presented by: Felix W. Landerer

Deep ocean contribution to sea level and energy budget not detectable over the past decade

11:15 10 Inga Bergmann-Wolf, Liangjing Zhang, Henryk Dobslaw
Presented by: Inga Bergmann-Wolf

Impact of global eustatic sea-level variations for the approximation of geocenter motion from GRACE

11:30 11 Sarah Kwon, Don Chambers
Presented by: Sarah Kwon

Understanding Oceanographic Contribution to Polar Motion
Presented by:  R. Ray
Testing Tide Models and Deducing Tidal Corrections from GRACE Range-Rate Data

12:00  13  R.J. Bingham, K. Haines, D. Lea
Presented by:  R.J. Bingham
How well can we measure the ocean’s mean dynamic topography from space?

Poster  20  Denis Volkov, Felix Landerer
Presented by:  Felix Landerer
Internal and external forcing of sea level variability in the Black Sea

Poster  21  Cecilia Peralta-Ferriz, James H. Morison
Presented by:  Jennifer Bonin
Bridging a possible gap of GRACE observations in the Arctic Ocean using existing GRACE data and in situ bottom pressure sensors

Poster  22  Katherine Quinn
Presented by:  Rui Ponte
Separation of signals and noise in GRACE data over the ocean