

# List of Publications

## Peer-reviewed articles

- Jäggi, A., G. Beutler, U. Hugentobler (2002): Using Double Difference Information from Network Solutions to Generate Observations for a Virtual GPS Reference Receiver, in *Vistas for Geodesy in the New Millennium*, edited by J. Adam and K.P. Schwarz, pp. 59-65, Springer, ISBN 978-3-540-43454-2.
- Jäggi, A., G. Beutler, U. Hugentobler (2005a): Reduced-dynamic orbit determination and the use of accelerometer data, *Advances in Space Research*, 36(3), 438-444, DOI: 10.1016/j.asr.2004.11.028.
- Jäggi, A., U. Hugentobler, G. Beutler (2005b): Efficient Stochastic Orbit Modeling Techniques using Least Squares Estimators, in *A Window on the future of geodesy*, edited by F. Sanso, pp. 175-180, Springer, ISBN 978-3-540-24055-6, DOI: 10.1007/3-540-27432-4\_31.
- Jäggi, A., H. Bock, U. Hugentobler, G. Beutler (2005c): Comparison of Different Stochastic Orbit Modeling Techniques, in *Earth Observation with CHAMP – Results from Three Years in Orbit*, edited by C. Reigber, H. Lühr, P. Schwintzer, and J. Wickert, pp. 89-94, Springer, ISBN 978-3-540-22804-2, DOI: 10.1007/3-540-26800-6\_14.
- Jäggi, A., U. Hugentobler, G. Beutler (2006): Pseudo-stochastic orbit modeling techniques for low-Earth orbiters, *Journal of Geodesy*, 80(1), 47-60, DOI: 10.1007/s00190-006-0029-9.
- Jäggi, A., U. Hugentobler, H. Bock, G. Beutler (2007a): Precise Orbit Determination for GRACE Using Undifferenced or Doubly Differenced GPS Data, *Advances in Space Research*, 39(10), 1612-1619, DOI: 10.1016/j.asr.2007.03.012.
- Jäggi, A., G. Beutler, H. Bock, U. Hugentobler (2007b): Kinematic and highly reduced-dynamic LEO orbit determination for gravity field estimation, in *Dynamic Planet – Monitoring and Understanding a Dynamic Planet with Geodetic and Oceanographic Tools*, edited by C. Rizos and P. Tregoning, pp. 354-361, Springer, ISBN 978-3-540-49349-5, DOI: 10.1007/978-3-540-49350-1\_52.
- Jäggi, A., H. Bock, R. Pail, H. Goinger (2008): Highly Reduced Dynamic Orbits and their Use for Global Gravity Field Recovery: A Simulation Study for GOCE, *Studia Geophysica et Geodaetica*, 52(3), 341-359, DOI: 10.1007/s11200-008-0025-z.
- Jäggi, A., G. Beutler, L. Prange, R. Dach, L. Mervart (2009a): Assessment of GPS-only observables for Gravity Field Recovery from GRACE, in *Observing our Changing Earth*, edited by M. Sideris, pp. 113-123, Springer, ISBN 978-3-540-85425-8, DOI: 10.1007/978-3-540-85426-5\_14.
- Jäggi, A., R. Dach, O. Montenbruck, U. Hugentobler, H. Bock, G. Beutler (2009b): Phase center modeling for LEO GPS receiver antennas and its impact on precise orbit determination, *Journal of Geodesy*, 83(12), 1145-1162, DOI: 10.1007/s00190-009-0333-2.
- Jäggi, A., G. Beutler, L. Mervart (2010): GRACE Gravity Field Determination using the Celestial Mechanics Approach – First Results, in *Gravity, Geoid and Earth Observation*, edited by S. Mertikas, pp. 177-184, Springer, ISBN 978-3-642-10633-0, DOI: 10.1007/978-3-642-10634-7\_24.
- Jäggi, A., H. Bock, L. Prange, U. Meyer, G. Beutler (2011a): GPS-only gravity field recovery with GOCE, CHAMP, and GRACE, *Advances in Space Research*, 47(6), 1020-1028, DOI: 10.1016/j.asr.2010.11.008.
- Jäggi, A., H. Bock, R. Floberghagen (2011b): GOCE orbit predictions for SLR tracking, *GPS Solutions*, 15(2), 129-137, DOI: 10.1007/s10291-010-0176-6.
- Jäggi, A., L. Prange, U. Hugentobler (2011c): Impact of covariance information of kinematic positions on orbit reconstruction and gravity field recovery, *Advances in Space Research*, 47(9), 1472-1479, DOI: 10.1016/j.asr.2010.12.009.
- Jäggi, A., G. Beutler, U. Meyer, L. Prange, R. Dach, L. Mervart (2012a): AIUB-GRACE02S – Status of GRACE Gravity Field Recovery using the Celestial Mechanics Approach, in *Geodesy for Planet Earth*, edited by S. Kenyon, M.C. Pacino, and U. Marti, pp. 161-170, Springer, ISBN 978-3-642-20337-4, DOI: 10.1007/978-3-642-20338-1\_20.
- Jäggi, A., O. Montenbruck, Y. Moon, M. Wermuth, R. König, G. Michalak, H. Bock, D. Bodenmann (2012b): Inter-agency comparison of TanDEM-X baseline solutions, *Advances in Space Research*, 50(2), 260-271, DOI: 10.1016/j.asr.2012.03.027.
- Jäggi, A., H. Bock, U. Meyer, G. Beutler, J. van den IJssel (2015): GOCE: assessment of GPS-only gravity field determination, *Journal of Geodesy*, 89(1), 33-48. DOI 10.1007/s00190-014-0759-z.

Jäggi, A., G. Beutler, U. Meyer, H. Bock, L. Mervart (2016a): The Role of Position Information for the Analysis of K-Band data: Experiences from GRACE and GOCE for GRAIL Gravity Field Recovery, in *VIII Hotine-Marussi Symposium on Mathematical Geodesy*, edited by N. Sneeuw, P. Novak, M. Crespi, F. Sanso, pp. 157-163, Springer, ISBN 978-3-319-24548-2, DOI: 10.1007/1345\_2015\_63.

Jäggi, A., C. Dahle, D. Arnold, H. Bock, U. Meyer, G. Beutler, J. van den IJssel (2016b): Swarm kinematic orbits and gravity fields from 18 months of GPS data, *Advances in Space Research*, 57(1), 218-233. DOI: 10.1016/j.asr.2015.10.035.

Jäggi, A., M. Weigelt, F. Flechtner, A. Güntner, T. Mayer-Gürr, S. Martinis, S. Bruinsma, J. Flury, S. Bourgogne, H. Steffen, U. Meyer, Y. Jean, A. Sušnik, A. Grahsl, D. Arnold, K. Cann-Guthäuser, R. Dach, Z. Li, Q. Chen, T. van Dam, C. Gruber, L. Poropat, B. Gouweleeuw, A. Kvas, B. Klinger, J.-M. Lemoine, R. Biancale, H. Zwenzner, T. Bandikova, A. Shabanloui (2019): European Gravity Service for Improved Emergency Management (EGSIEM) - from concept to implementation, *Geophysical Journal International*, 218(3), 1572-1590, DOI: 10.1093/gji/ggz239.

Jäggi, A., U. Meyer, M. Lasser, B. Jenny, T. Lopez, F. Flechtner, C. Dahle, C. Förste, T. Mayer-Gürr, A. Kvas, J.-M. Lemoine, S. Bourgogne, M. Weigelt, A. Groh (2020): International Combination Service for Time-Variable Gravity Fields (COST-G) - Start of Operational Phase and Future Perspectives, in *IAG Symposia Series*, edited by J. Freymueller, Springer, DOI: 10.1007/1345\_2020\_109, in press.

Allende-Alba, G., O. Montenbruck, A. Jäggi, D. Arnold, F. Zangerl (2017): Reduced-dynamic and kinematic baseline determination for the Swarm mission, *GPS Solutions*, 21(3), 1275-1284, DOI: 10.1007/s10291-017-0611-z.

Andritsch, F., A. Grahsl, R. Dach, T. Schildknecht, A. Jäggi (2020): Simulation of tracking scenarios to LAGEOS and Etalon Satellites, *Journal of Geodesy*, 94, 40, DOI: 10.1007/s00190-019-01327-w.

Arnold, D., M. Meindl, G. Beutler, R. Dach, S. Schaer, S. Lutz, L. Prange, K. Sośnica, L. Mervart, A. Jäggi (2015a): CODE's new solar radiation pressure model for GNSS orbit determination, *Journal of Geodesy*, 89(8), 775-791, DOI: 10.1007/s00190-015-0814-4.

Arnold, D., S. Bertone, A. Jäggi, G. Beutler, L. Mervart (2015b): GRAIL gravity field determination using the Celestial Mechanics Approach, *Icarus*, 261, 182-192, DOI: 10.1016/j.icarus.2015.08.015.

Arnold, D., S. Lutz, R. Dach, A. Jäggi, J. Steinborn (2016): Near Real-Time Coordinate Estimation from Double-Difference GNSS Data – A Case Study for the National Multi-Hazard Early Warning System in the Sultanate of Oman, in *IAG 150 years*, edited by C. Rizos and P. Willis, pp. 691-697, Springer, ISBN 978-3-319-24603-1, DOI: 10.1007/1345-2015\_173.

Baur, O., H. Bock, E. Höck, A. Jäggi, S. Krauss, T. Mayer-Gürr, T. Reubelt, C. Siemes, N. Zehentner (2014): Comparison of GOCE-GPS gravity fields derived by different approaches, *Journal of Geodesy*, 88(10), 959-973. DOI 10.1007/s00190-014-0736-6.

Bertone, S., D. Arnold, V. Girardin, M. Lasser, U. Meyer, A. Jäggi (2021): Assessing reduced-dynamic parametrizations for GRAIL orbit determination and the recovery of independent lunar gravity field solutions, *Earth and Space Science*, 8(6), e2020EA001454, DOI: 10.1029/2020EA001454.

Beutler, G., A. Jäggi, U. Hugentobler, L. Mervart (2006): Efficient satellite orbit modelling using pseudo-stochastic parameters, *Journal of Geodesy*, 80(7), 353-372, DOI: 10.1007/s00190-006-0072-6.

Beutler, G., A. Jäggi, L. Mervart, U. Meyer (2010a): The celestial mechanics approach: theoretical foundations, *Journal of Geodesy*, 84(10), 605-624, DOI: 10.1007/s00190-010-0401-7.

Beutler, G., A. Jäggi, L. Mervart, U. Meyer (2010b): The celestial mechanics approach: application to data of the GRACE mission, *Journal of Geodesy*, 84(11), 661-681, DOI: 10.1007/s00190-010-0402-6.

Beutler, G., A. Villiger, R. Dach, A. Verdun, A. Jäggi (2020): Long Polar Motion Series: Facts and Insights, *Advances in Space Research*, 66(11), 2487-2515, DOI: 10.1016/j.asr.2020.08.033.

Blanc, M., O. Prieto Ballesteros, N. Andre, J. Gomez-Elvira, G. Jones, V. Sterken, W. Desprats, L. Gurvits, K. Khurana, G. Balmino, A. Blöcker, R. Broquet, E. Bunce, C. Cavel, G. Choblet, G. Collins, M. Coradini, J. Cooper, D. Dirkx, D. Fontaine, P. Garnier, D. Gaudin, P. Hartogh, H. Hussmann, A. Genova, A. Jäggi, S. Kempf, N. Krupp, L. Lara, J. Lasue, V. Lainey, F. Leblanc, J.-P. Lebreton, A. Longobardo, R. Lorenz, P. Martins, Z. Martins, J.-C. Marty, A. Masters, D. Mimoun, E. Palomba, V. Parro, P. Regnier, J. Saur, A. Schutte, E. Sittler, T. Spohn, R. Srama, K. Stephan, K. Szego, F. Tosi, S. Vance, R. Wagner, T. van Hoolst, J.-E. Wahlgren, F. Westall, M. Volwerk, P. Wurz

(2020): Joint Europa Mission (JEM) a multi-scale study of Europa to characterize its habitability and search for extant life, *Planetary and Space Science*, 193, DOI: 10.1016/j.pss.2020.104960.

Bock, H., U. Hugentobler, A. Jäggi, G. Beutler (2005): Precise orbit determination for CHAMP using an efficient kinematic and reduced-dynamic procedure, in *Earth Observation with CHAMP – Results from Three Years in Orbit*, edited by C. Reigber, H. Lühr, P. Schwintzer, and J. Wickert, pp. 157-162, Springer, ISBN 978-3-540-22804-2, DOI: 10.1007/3-540-26800-6\_25.

Bock, H., A. Jäggi, D. Svehla, G. Beutler, U. Hugentobler, P. Visser (2007): Precise Orbit Determination for the GOCE Satellite Using GPS, *Advances in Space Research*, 39(10), 1638-1647, DOI: 10.1016/j.asr.2007.02.053.

Bock, H., A. Jäggi, R. Dach, G. Beutler, S. Schaer (2009a): GPS single-frequency orbit determination for Low Earth Orbiting satellites, *Advances in Space Research*, 43(5), 783-791, DOI: 10.1016/j.asr.2008.12.003.

Bock, H., R. Dach, A. Jäggi, G. Beutler (2009b): High-rate GPS clock corrections from CODE: Support of 1 Hz applications, *Journal of Geodesy*, 83(11), 1083-1094, DOI: 10.1007/s00190-009-0326-1.

Bock, H., A. Jäggi, U. Meyer, R. Dach, G. Beutler (2011a): Impact of GPS antenna phase center variations on precise orbits of the GOCE satellite, *Advances in Space Research*, 47(11), 1885-1893, DOI 10.1016/j.asr.2011.01.017.

Bock, H., A. Jäggi, U. Meyer, P. Visser, J. van den Ijssel, T. van Helleputte, M. Heinze, U. Hugentobler (2011b): GPS-derived orbits for the GOCE satellite, *Journal of Geodesy*, 85(11), 807-818, DOI: 10.1007/s00190-011-0484-9.

Bock, H., A. Jäggi, G. Beutler, U. Meyer (2014): GOCE: Precise orbit determination for the entire mission, *Journal of Geodesy*, 88(11), 1047-1060. DOI 10.1007/s00190-014-0742-8.

Bruinsma, S., D. Arnold, A. Jäggi, N. Sánchez-Ortiz (2017): Semi-empirical thermosphere model evaluation at low altitude with GOCE densities, *Journal of Space Weather and Space Climate*, 7(A4), DOI: 10.1051/swsc/2017003.

Cardellach, E., J. Wickert, R. Baggen, J. Benito, A. Camps, N. Catarinho, B. Chapron, F. Fabra, G. Flato, H. Fragner, C. Gabarró, C. Gommenginger, C. Haas, S. Healy, M. Hernandez-Pajares, P. Hoeg, A. Jäggi, J. Kainulainen, S. Abbas Khan, N.M.K. Lemke, W. Li, S.V. Nghiem, N. Pierdicca, M. Portabella, K. Rautiainen, A. Rius, I. Sasgen, M. Semmling, C.K. Shum, F. Soulard, A.K. Steiner, S. Tailhades, M. Thomas, R. Vilaseca, C. Zuffada (2017): GNSS Transpolar Earth Reflectometry exploring system (G-TERN): mission concept, *IEEE Access Journal*, 6(1), 13980-14018. DOI: 10.1109/ACCESS.2018.2814072.

Cazenave, A., WCRP Global Sea Level Budget Group (2018): Global sea-level budget 1993-present. *Earth System Science Data*, 10(3), 1551-1590, DOI: 10.5194/essd-10-1551-2018

Dach, R., E. Brockmann, S. Schaer, G. Beutler, M. Meindl, L. Prange, H. Bock, A. Jäggi, L. Ostini (2009): GNSS processing at CODE: status report, *Journal of Geodesy*, 83(3-4), 353-366, DOI: 10.1007/s00190-008-0281-2.

Dach, R., A. Sušnik, A. Grahs, A. Villiger, S. Schaer, D. Arnold, L. Prange, A. Jäggi (2019): Improving GLONASS Orbit Quality by Re-estimating Satellite Antenna Offsets, *Advances in Space Research*, 63(12), 3835-3847, DOI: 10.1016/j.asr.2019.02.031.

Dahle C., D. Arnold, A. Jäggi (2017): Impact of tracking loop settings of the Swarm GPS receiver on orbit and gravity field results, *Advances in Space Research*, 59(12), 2843-2854, DOI 10.1016/j.asr.2017.03.003.

Dach, R., I. Selmke, A. Villiger, D. Arnold, L. Prange, S. Schaer, D. Sidorov, P. Stebler, A. Jäggi, U. Hugentobler (2021): Review of recent GNSS modelling improvements based on CODEs Repro3 contribution. *Advances in Space Research*, 68(3), 1263-1280, DOI: 10.1016/j.asr.2021.04.046.

Fecher, T., R. Pail, T. Gruber, GOCO Consortium (2017): GOCO05c: A New Combined Gravity Field Model Based on Full Normal Equations and Regionally Varying Weighting. *Surveys in Geophysics*, 38(3), 571-590, DOI 10.1007/s10712-016-9406-y.

HosseiniArani, A., S. Bertone, D. Arnold, A. Stark, H. Hussmann, T. Beck, C. Herny, A. Pommerol, A. Jäggi, N. Thomas (2021): Comprehensive in-orbit performance evaluation of the BepiColombo Laser Altimeter (BELA), *Planetary and Space Science*, 195, DOI: 10.1016/j.pss.2020.10508.

Hugentobler, U., A. Jäggi, S. Schaer, G. Beutler (2005): Combined Processing of GPS Data from Ground Station and LEO Receivers in a Global Solution, in *A Window on the future of geodesy*, edited by F. Sanso, pp. 169-174, Springer, ISBN 978-3-540-24055-6, DOI: 10.1007/3-540-27432-4\_30.

Innerkofler, J., G. Kirchengast, M. Schwärz, C. Pock, A. Jäggi, Y. Andres, C. Marquardt (2020): Precise Orbit Determination for Climate Applications of GNSS Radio Occultation including Uncertainty Estimation, *Remote Sensing*, 12, 1180, DOI: 10.3390/rs12071180.

Jean, Y., U. Meyer, A. Jäggi (2018): Combination of GRACE monthly gravity field solutions from different processing strategies, *Journal of Geodesy*, 92(11), 1313-1328, DOI: 10.1007/s00190-018-1123-5.

Kobel, C., D. Arnold, A. Jäggi (2019): Combination of Precise Orbit Solutions for Sentinel-3A using Variance Component Estimation, *Advances in Geosciences*, 50, 27-37, DOI: 10.5194/adgeo-50-27-2019.

Kvas, A., J. M. Brockmann, S. Krauss, T. Schubert, T. Gruber, U. Meyer, T. Mayer-Gürr, W.-D. Schuh, A. Jäggi, R. Pail (2021): GOCCO06s – A satellite-only global gravity field model, *Earth System Science Data.*, 13, 99-118, DOI: 10.5194/essd-13-99-2021.

Lasser, M., U. Meyer, D. Arnold, A. Jäggi (2020a): Stochastic noise modelling of kinematic orbit positions in the celestial mechanics approach (CMA), *Advances in Geosciences*, accepted.

Lasser, M., U. Meyer, A. Jäggi, T. Mayer-Gürr, A. Kvas, K. H. Neumayer, C. Dahle, F. Flechtner, J.-M. Lemoine, I. Koch, M. Weigelt, J. Flury (2020b): Benchmark data for verifying background model implementations in orbit and gravity field determination software, *Advances in Geosciences*, 55, 1-11, DOI: 10.5194/adgeo-55-1-2020.

Lopez, T., A. Al Bitar, S. Biancamaria, A. Güntner, A. Jäggi (2020): On the use of satellite remote sensing to detect floods and droughts at large scales, *Surveys in Geophysics*, 41, 1461–1487, DOI: 10.1007/s10712-020-09618-0.

Lutz, S., G. Beutler, S. Schaer, R. Dach, A. Jäggi (2016a): CODE's new ultra-rapid orbit and ERP products for the IGS, *GPS Solutions*, 20(2), 239-250, DOI: 10.1007/s10291-014-0432-2.

Lutz, S., M. Meindl, P. Steigenberger, G. Beutler, K. Sośnica, S. Schaer, R. Dach, D. Arnold, D. Thaller, A. Jäggi (2016b): Impact of the arc length on GNSS analysis results, *Journal of Geodesy*, 90(4), 365-378, DOI: 10.1007/s00190-015-0878-1.

Mao, X., D. Arnold, V. Girardin, A. Villiger, A. Jäggi (2021): Dynamic GPS-based LEO orbit determination with 1 cm precision using the Bernese GNSS Software, *Advances in Space Research*, 67(2), 788-805, DOI: 10.1016/j.asr.2020.10.012.

Meindl, M., G. Beutler, D. Thaller, R. Dach, A. Jäggi (2013): Geocenter coordinates estimated from GNSS data as viewed by perturbation theory, *Advances in Space Research*, 51(7), 1047-1064, DOI: 10.1016/j.asr.2012.10.026.

Meindl, M., G. Beutler, D. Thaller, R. Dach, A. Jäggi (2015): A comment on the article “A collinearity diagnosis of the GNSS geocenter determination” by P. Rebischung, Z. Altamimi, and T. Springer, *Journal of Geodesy*, 89(2), 189-194, DOI: 10.1007/s00190-014-0765-1.

Meyer, U., A. Jäggi, G. Beutler (2012a): The Impact of Attitude Control on GRACE Accelerometry and Orbits, in *Geodesy for Planet Earth*, edited by S. Kenyon, M.C. Pacino, and U. Marti, pp. 139-146, Springer, ISBN 978-3-642-20337-4, DOI: 10.1007/978-3-642-20338-1\_17.

Meyer, U., A. Jäggi, G. Beutler (2012b): Monthly gravity field solutions based on GRACE observations generated with the Celestial Mechanics Approach, *Earth and Planetary Science Letters*, 345-348, 72-80, DOI: 10.1016/j.epsl.2012.06.026.

Meyer, U., A. Jäggi, G. Beutler, H. Bock (2015b): The impact of common versus separate estimation of orbit parameters on GRACE gravity field solutions, *Journal of Geodesy*, 89(7), 685-696, DOI: 10.1007/s00190-015-0807-3.

Meyer, U., C. Dahle, N. Sneeuw, A. Jäggi, G. Beutler, H. Bock (2016a): The Effect of Pseudo-Stochastic Orbit Parameters on GRACE Monthly Gravity Fields: Insights from Lumped Coefficients, in *VIII Hotine-Marussi Symposium on Mathematical Geodesy*, edited by N. Sneeuw, P. Novak, M. Crespi, F. Sanso, pp. 177-183, Springer, ISBN 978-3-319-24548-2, DOI: 10.1007/1345\_2015\_67.

Meyer, U., A. Jäggi, Y. Jean, G. Beutler (2016b): AIUB-RL02: an improved time series of monthly gravity fields from GRACE data, *Geophysical Journal International*. 205, 1196-1207, DOI: 10.1093/gji/ggw081.

Meyer, U., K. Sośnica, D. Arnold, C. Dahle, D. Thaller, R. Dach, A. Jäggi (2019a): SLR, GRACE and Swarm Gravity Field Determination and Combination, *Remote Sensing*, 11(8), 956, DOI: 10.3390/rs11080956

Meyer, U., Y. Jean, A. Kvas, C. Dahle, J.M. Lemoine, A. Jäggi (2019b): Combination of GRACE monthly gravity fields on the normal equation level, *Journal of Geodesy*, 93, 1645-1658, DOI: 10.1007/s00190-019-01274-6.

Montenbruck, O., M. Garcia-Fernandez, Y. Yoon, S. Schön, A. Jäggi (2009): Antenna Phase Center Calibration for Precise Positioning of LEO Satellites, *GPS Solutions*, 13(1), 23-34, DOI: 10.1007/s10291-008-0094-z.

Montenbruck, O., S. Hackel, A. Jäggi (2018): Precise orbit determination of the Sentinel-3A altimetry satellite using ambiguity-fixed GPS carrier phase observations, *Journal of Geodesy*, 92(7), 711-726, DOI: 10.1007/s00190-017-1090-2.

Pail, R., H. Goiginger, W.-D. Schuh, E. Höck, J. M. Brockmann, T. Fecher, T. Gruber, T. Mayer-Gürr, J. Kusche, A. Jäggi, D. Rieser (2010): Combined satellite gravity field model GOCO01S derived from GOCE and GRACE, *Geophysical Research Letters*, 37, L20314, DOI: 10.1029/2010GL044906.

Peter H., A. Jäggi, J. Fernandez, D. Escobar, F. Ayuga, D. Arnold, M. Wermuth, S. Hackel, M. Otten, W. Simons, P. Visser, U. Hugentobler, P. Féminas (2017): Sentinel-1A – First precise orbit determination results, *Advances in Space Research*, 60(5), 879-892, DOI: 10.1016/j.asr.2017.05.034.

Prange, L., A. Jäggi, G. Beutler, R. Dach, L. Mervart (2009): Gravity Field Determination at the AIUB – the Celestial Mechanics Approach, in *Observing our Changing Earth*, edited by M. Sideris, pp. 353-362, Springer, ISBN 978-3-540-85425-8, DOI: 10.1007/978-3-85426-5\_42.

Prange, L., A. Jäggi, R. Dach, H. Bock, G. Beutler, L. Mervart (2010): The AIUB-CHAMP02S and the Influence of GNSS Model Changes on Gravity Field Recovery using spaceborne GPS, *Advances in Space Research*, 45(2), 215-224.

Prange, L., R. Dach, S. Lutz, S. Schaer, A. Jäggi (2016a): The CODE MGEX Orbit and Clock Solution, in *IAG 150 years*, edited by C. Rizos and P. Willis, pp. 767-773, Springer, ISBN 978-3-319-24603-1, DOI: 10.1007/1345-2015\_161.

Prange, L., E. Orliac, R. Dach, D. Arnold, G. Beutler, S. Schaer, A. Jäggi (2016b): CODE's five-system orbit and clock solution – the challenges of multi-GNSS data analysis, *Journal of Geodesy*, 91(4), 345-360, DOI: 10.1007/s00190-016-0968-8.

Prange, L., G. Beutler, R. Dach, D. Arnold, S. Schaer, A. Jäggi (2020a): An empirical solar radiation pressure model for satellites moving in the orbit-normal mode, *Advances in Space Research*, 65(1), 235-250, DOI: 10.1016/j.asr.2019.07.031.

Prange, L., A. Villiger, D. Sidorov, S. Schaer, G. Beutler, R. Dach, A. Jäggi (2020b): Overview of CODE's MGEX solution with the focus on Galileo, *Advances in Space Research*, 66(12), 2786-2798, DOI: 10.1016/j.asr.2020.04.038.

Scaramuzza S., R. Dach, G. Beutler, D. Arnold, A. Sušnik, A. Jäggi (2017): Dependency of geodynamic parameters on the GNSS Constellation, *Journal of Geodesy*, 92, 93-104, DOI: 10.1007/s00190-017-1047-5.

Schaer, S., A. Villiger, D. Arnold, R. Dach, L. Prange, A. Jäggi (2021): The CODE ambiguity-fixed clock and phase bias analysis products: generation, properties, and performance, *Journal of Geodesy*, 95, 81, DOI: 10.1007/s00190-021-01521-9.

Schmid, R., R. Dach, X. Collilieux, A. Jäggi, M. Schmitz, F. Dilssner (2016): Absolute IGS antenna phase center model igs08.atx: status and potential improvements, *Journal of Geodesy*, 90(4), 343-364, DOI: 10.1007/s00190-015-0876-3.

Schreiter, L., D. Arnold, V. Sterken, A. Jäggi (2019): Mitigation of ionospheric signatures in Swarm GPS gravity field estimation using weighting strategies. *Annales Geophysicae*, 37(1), 111-127, DOI: 10.5194/angeo-37-111-2019.

Schreiter, L., O. Montenbruck, F. Zangerl, C. Siemes, D. Arnold, A. Jäggi (2021): Correction of GPS L2 carrier phase tracking loop artifacts and its impact on orbit quality and gravity field recovery for the Swarm mission, *GPS Solutions*, 25, 70, DOI: 10.1007/s10291-021-01107-0.

Sidorov, D., R. Dach, B. Polle, L. Prange, A. Jäggi (2020): Adopting the Empirical CODE Orbit Model to Galileo satellites, *Advances in Space Research*, 66(12), 2799-2811, DOI: 10.1016/j.asr.2020.05.028.

Sośnica, K., D. Thaller, A. Jäggi, R. Dach, G. Beutler (2012): Sensitivity of Lageos Orbits to Global Gravity Field Models, *Artificial Satellites*, 47(2), 47-65, DOI: 10.2478/v10018-012-0013-y.

Sośnica, K., D. Thaller, R. Dach, A. Jäggi, G. Beutler (2013): Impact of loading displacements on SLR-derived parameters and on the consistency between GNSS and SLR results, *Journal of Geodesy*, 87(8), 751-769, DOI: 10.1007/s00190-013-0644-1.

Sośnica, K., A. Jäggi, D. Thaller, R. Dach, G. Beutler (2014): Contribution of Starlette, Stella, and AJISAI to the SLR-derived global reference frame, *Journal of Geodesy*, 88(8), 789-804. DOI: 10.1007/s00190-014-0722-z.

Sośnica, K., D. Thaller, R. Dach, P. Steigenberger, G. Beutler, D. Arnold, A. Jäggi (2015a): Satellite Laser Ranging to GPS and GLONASS, *Journal of Geodesy*, 89(7), 725-743, DOI: 10.1007/s00190-015-0810-8.

Sośnica, K., A. Jäggi, U. Meyer, D. Thaller, G. Beutler, D. Arnold, R. Dach (2015b): Time variable Earth's gravity field from SLR satellites, *Journal of Geodesy*, 89(10), 945-960, DOI: 10.1007/s00190-015-0825-1.

Strugarek, D., K. Sośnica, A. Jäggi (2019a): Characteristics of GOCE orbits based on Satellite Laser Ranging. *Advances in Space Research*, 63(1), 417-431, DOI: 10.1016/j.asr.2018.08.033.

Strugarek, D., K. Sośnica, D. Arnold, A. Jäggi, R. Zajdel, G. Bury, M. Drożdżewski (2019b): Determination of global geodetic parameters using SLR measurements to Sentinel-3 satellites, *Remote Sensing*, 11, 2282, DOI: 10.3390/rs11192282.

Strugarek, D., K. Sośnica, D. Arnold, A. Jäggi, R. Zajdel, G. Bury (2021): Determination of SLR station coordinates based on LEO, LARES, LAGEOS, and Galileo satellites, *Earth, Planets and Space*, 73, 87, DOI: 10.1186/s40623-021-01397-1.

Sušnik, A., A. Grahsl, D. Arnold, A. Villiger, R. Dach, G. Beutler, A. Jäggi (2020): Validation of the EGSIEM-REPRO GNSS Orbits and Satellite Clock Corrections, *Remote Sensing*, 12, 2322, DOI: 10.3390/rs12142322.

Teixeira da Encarnação, J., D. Arnold, A. Bezdek, C. Dahle, E. Doornbos, J. van den IJssel, A. Jäggi, T. Mayer-Gürr, J. Sebera, P. Visser, N. Zehentner (2016): Gravity field models derived from Swarm GPS data, *Earth, Planets and Space*, 68(127), DOI: 10.1186/s40623-016-0499-9.

Teixeira da Encarnação, J., P. Visser, D. Arnold, A. Bezdek, E. Doornbos, M. Ellmer, J. Guo, J. van den IJssel, E. Iorfida, A. Jäggi, J. Klokočník, S. Krauss, X. Mao, T. Mayer-Gürr, U. Meyer, J. Sebera, C.K. Shum, C. Zhang, Y. Zhang (2020): Description of the multi-approach gravity field models from Swarm GPS data, *Earth System Science Data*, 12(2), 1385-1417, DOI: 10.5194/essd-12-1385-2020.

Thaller, D., K. Sośnica, R. Dach, A. Jäggi, G. Beutler, M. Mareyen, B. Richter (2014): Geocenter coordinates from GNSS and combined GNSS-SLR solutions using satellite co-locations, in *Earth on the Edge: Science for a Sustainable Planet*, edited by C. Rizos and P. Willis, pp. 129-134, Springer, ISBN 978-3-642-37222-3, DOI: 10.1007/978-3-642-37222-3\_16.

Villiger, A., S. Schaer, R. Dach, L. Prange, A. Sušnik, A. Jäggi (2019): Determination of GNSS pseudo-absolute code biases and their long-term combination, *Journal of Geodesy*, 93, 1487-1500, DOI: 10.1007/s00190-019-01262-w.

Villiger, A., R. Dach, S. Schaer, L. Prange, F. Zimmermann, H. Kuhlmann, G. Wübbena, M. Schmitz, G. Beutler, A. Jäggi (2020): GNSS scale determination using calibrated receiver and Galileo satellite antenna patterns, *Journal of Geodesy*, 94, 93, DOI: 10.1007/s00190-020-01417-0.

Visser, P., J. van den IJssel, T. van Helleputte, H. Bock, A. Jäggi, G. Beutler, D. Švehla, U. Hugentobler, M. Heinze (2009): Orbit determination for the GOCE satellite, *Advances in Space Research*, 43(5), 760-768, DOI: 10.1016/j.asr.2008.09.016.

Weigelt, M., T. van Dam, A. Jäggi, L. Prange, M.J. Tourian, W. Keller, N. Sneeuw (2013): Time-Variable Gravity Signal in Greenland Revealed by High-Low Satellite-to-Satellite Tracking, *Journal of Geophysical Research*, 118(7), 3848-3859, DOI: 10.1002/jgrb.50283.

Wickert, J., E. Cardellach, J. Bandeiras, L. Bertino, O. Andersen, A. Camps, N. Catarino, B. Chapron, F. Fabra, N. Flory, G. Foti, C. Gommenginger, J. Hatton, P. Høeg, A. Jäggi, M. Kern, T. Lee, Z. Li, M. Martin-Neira, H. Park, N. Pierdicca, G. Ressler, A. Rius, J. Roselló, J. Saynisch, F. Soulat, C.K. Shum, M. Semmling, A. Sousa, J. Xie, C. Zuffada (2016): GEROS-ISS: GNSS REflectometry, Radio Occultation and Scatterometry onboard the International Space Station, *IEEE Transactions on Geoscience and Remote Sensing*, 9(10), 4552-4581, DOI: 10.1109/TGRS.2016.2614428.

Zajdel, R., K. Sośnica, R. Dach, G. Bury, L. Prange, A. Jäggi (2019): Network effects and handling of the geocenter motion in multi-GNSS processing, *Journal of Geophysical Research, Solid Earth*, 124(6), 5970-5989, DOI: 10.1029/2019JB017443.

Zenner, L., T. Gruber, A. Jäggi, G. Beutler (2010): Propagation of atmospheric model errors to gravity potential harmonics – Impact on GRACE De-Aliasing. *Geophysical Journal International*, 182(2), 797-807, DOI: 10.1111/j.1365-246X.2010.04669.x.

Zenner, L., T. Gruber, G. Beutler, A. Jäggi, F. Flechtner, T. Schmidt, J. Wickert, E. Fagiolini, G. Schwarz, T. Trautmann (2012): Using Atmospheric Uncertainties for GRACE De-Aliasing – First Results, in *Geodesy for Planet Earth*, edited by S. Kenyon, M.C. Pacino, and U. Marti, pp. 147-152, Springer, ISBN 978-3-642-20337-4, DOI: 10.1007/978-3-642-20338-1\_18.

## Books

Jäggi, A. (2007): Pseudo-Stochastic Orbit Modeling of Low Earth Satellites Using the Global Positioning System, *Geodätisch-geophysikalische Arbeiten in der Schweiz*, Vol. 73, ISBN 978-3-908440-17-8.

## Lecture Notes

Jäggi, A., D. Arnold (2017): Precise Orbit Determination, in *Global Gravity Field Modeling from Satellite-to-Satellite Tracking Data*, edited by M. Naeimi, J. Flury, pp. 35-80, Springer, ISBN 978-3-319-49940-6, DOI: 10.1007/978-3-319-49941-3\_2.

## Submitted articles

Geisser, L., U. Meyer, D. Arnold, A. Jäggi (2021): Contribution of LARES SLR data to co-estimated Earth geopotential coefficients using the long-arc approach. Submitted to *IAG Symposia Series*.

## Other relevant publications

Jäggi, A. (2001): Verwendung von Doppeldifferenz Informationen aus Netzwerklösungen zur Generierung von Beobachtungen einer Virtuellen GPS Referenzstation, Master thesis, Astronomical Institute, University of Bern.

Jäggi, A., G. Beutler, H. Bock, U. Hugentobler, L. Prange (2007): LEO Precise Orbit Modelling and Global Gravity Field Determination, in *Swiss National Report on the Geodetic Activities in the Years 2003-2007*, edited by M. Troller, pp. 27-29, Section 5 (Geodynamics), Swiss Geodetic Commission.

Jäggi, A., H. Bock, D. Thaller, R. Dach, G. Beutler, L. Prange, U. Meyer (2010b): Precise Orbit Determination of Low Earth Satellites at AIUB, in *Proceedings of the ESA Living Planet Symposium*, ESA SP-686.

Jäggi, A. (2010c): Bahnen und Schwere, presented at the GOCE Summer-School, Herrsching, Germany, 31 May – 04 June 2010.

Jäggi, A., H. Bock, U. Meyer (2011a): GPS-only Gravity Field Recovery from GOCE, in *Proceedings of the 4th International GOCE User Workshop*, ESA SP-696.

Jäggi, A., M. Ploner, J. Utzinger, M. Prohaska, E. Pop, W. Gurtner, E. Brockmann (2011b): Satellite Laser Ranging at Zimmerwald, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by A. Wiget, pp. 18-19, Section 1 (Reference Frames), Swiss Geodetic Commission.

Jäggi, A., H. Bock, U. Meyer, L. Prange, G. Beutler, R. Dach (2011c): Phase center modeling and its impact on LEO Precise Orbit Determination, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by U. Marti, pp. 43-44, Section 2 (Gravity Field), Swiss Geodetic Commission.

Jäggi, A., G. Beutler, U. Meyer, L. Prange, L. Mervart (2011d): Global Gravity Field Determination based on the GRACE-Mission, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by U. Marti, pp. 45-46, Section 2 (Gravity Field), Swiss Geodetic Commission.

Jäggi, A., M. Ploner, J. Utzinger, M. Prohaska, E. Pop, W. Gurtner (2012a): ILRS Station Reports: Zimmerwald, Switzerland, in *International Laser Ranging Service 2009-2010 Report*, edited by C. Noll and M. Pearlman, pp. 12-81–12-82, International Laser Ranging Service.

Jäggi, A., K. Sośnica, D. Thaller, G. Beutler (2012b): Validation and estimation of low-degree gravity field coefficients using LAGEOS, in *Proceedings of the 17th International Workshop on Laser Ranging*, 48, pp. 302-304, Bundesamt für Kartographie und Geodäsie.

Jäggi, A., H. Bock, D. Thaller, K. Sośnica, U. Meyer, C. Baumann, R. Dach (2013): Precise Orbit Determination of Low Earth Satellites at AIUB using GPS and SLR data, in *Proceedings of the ESA Living Planet Symposium*, ESA SP-722.

Jäggi, A., H. Bock, U. Meyer (2014): GOCE Precise Orbit Determination for the entire mission – Challenges in the Final Mission Phase, in *Proceedings of the 5th International GOCE User Workshop*, ESA SP-728.

Jäggi, A. (2015): Precise Orbit Determination, presented at the Wilhelm und Else Heraeus Autumn School on Gravity Field Modeling from Satellite-to-Satellite Tracking Data, Bad Honnef, Germany, 04 – 09 October 2015.

Bertone, S., A. Jäggi, D. Arnold, G. Beutler, L. Mervart (2015): Doppler Orbit Determination of Deep Space Probes by the Bernese GNSS Software: First Results of the Combined Orbit Determination with inter-satellite Ka-Band Data from the GRAIL Mission, in *Proceedings of the 25<sup>st</sup> International Symposium on Space Flight Dynamics*.

Beutler, G., A. Jäggi (2010): Satellite Geodesy – Highlights and Main Achievements, in *Annual Report 2009, TUM Institute for Advanced Study*, edited by P. Dewilde, S. Hofmann, M. Jaeger and P. Regan, pp. 64-65, Institute for Advanced Study, Technische Universität München.

Beutler, G., A. Jäggi (2016): Bahn- und Gravitationsfeldbestimmung aus den Positionen tief fliegender Satelliten. In Handbuch der Geodäsie, Band "Erdmessung und Satellitengeodäsie", edited by W. Freeden, R. Rummel. Springer, DOI: 10.1007/978-3-662-46900-2\_4-2.

Bock, H., A. Jäggi, U. Hugentobler, R. Dach (2007): Processing Facility for ESA's GOCE Gravity Field Explorer Mission, in *Swiss National Report on the Geodetic Activities in the Years 2003-2007*, edited by M. Troller, pp. 27-29, Section 5 (Geodynamics), Swiss Geodetic Commission.

Bock, H., A. Jäggi, U. Meyer, R. Dach, G. Beutler (2011): Processing Facility for ESA's GOCE Gravity Field Explorer Mission, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by U. Marti, pp. 49-50, Section 2 (Gravity Field), Swiss Geodetic Commission.

Dach, R., H. Bock, P. Frizde, A. Gäde, U. Hugentobler, A. Jäggi, L. Mervart, M. Meindl, S. Schaer, C. Urschl, P. Walser, G. Beutler (2007): Bernese GPS Software, in *Swiss National Report on the Geodetic Activities in the Years 2003-2007*, edited by M. Troller, pp. 27-29, Section 5 (Geodynamics), Swiss Geodetic Commission.

Dach, R., S. Schaer, M. Meindl, H. Bock, A. Jäggi, S. Lutz, L. Ostini, L. Prange, A. Steinbach, D. Thaller, P. Walser, G. Beutler (2008a): Aspect of Global Multi-GNSS Processing, in *Proceedings of the International GNSS Service Analysis Center workshop 2008*, Miami Beach, FL, USA, June 2-6, 2008.

Dach, R., S. Schaer, M. Meindl, H. Bock, A. Jäggi, S. Lutz, U. Meyer, L. Ostini, L. Prange, A. Steinbach, D. Thaller, P. Walser, G. Beutler (2008b): Global Multi-GNSS Processing at CODE, in *Proceedings of the EUREF 2008 Symposium*, Brussels, Belgium, June 18-21, 2008.

Dach, R., S. Schaer, M. Meindl, H. Bock, A. Jäggi, S. Lutz, U. Meyer, L. Ostini, L. Prange, A. Steinbach, D. Thaller, P. Walser, G. Beutler (2009a): Global Multi-GNSS Processing at CODE, in *Proceedings of the International Symposium on Global Navigation Satellite Systems, Space-Based and Ground-Based Augmentation Systems and Applications*, Berlin, pp. 34-36, ISBN 978-3-938373-99-6.

Dach, R., H. Bock, U. Hugentobler, A. Jäggi, S. Lutz, M. Meindl, L. Mervart, U. Meyer, E. Orliac, L. Ostini, L. Prange, M. Rothacher, S. Schaer, K. Sosnica, A. Steinbach, D. Thaller, P. Walser, G. Beutler (2011a): Bernese Software, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by P.-Y. Gilliéron, pp. 93-94 Section 4 (Positioning and Applications), Swiss Geodetic Commission.

Dach, R., G. Beutler, A. Jäggi, T. Schildknecht (2011b): GNSS-Forschungsarbeiten am Astronomischen Institut der Universität Bern, *Geomatik Schweiz*, 109(6), 280-283.

Dach, R., S. Schaer, S. Lutz, M. Meindl, H. Bock, E. Orliac, L. Prange, D. Thaller, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, A. Wiget, G. Weber, H. Habrich, J. Ihde, P. Steigenberger, U. Hugentobler (2012): Center for Orbit Determination In Europe, in *IGS Technical Report 2011*, edited by M. Meindl, R. Dach, and Y. Jean, pp. 29-40, IGS Central Bureau.

Dach, R., S. Schaer, S. Lutz, M. Meindl, H. Bock, E. Orliac, L. Prange, D. Thaller, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, A. Wiget, G. Weber, H. Habrich, J. Ihde, P. Steigenberger, U. Hugentobler (2013): Center for Orbit Determination In Europe, in *IGS Technical Report 2012*, edited by R. Dach and Y. Jean, pp. 35-46, IGS Central Bureau.

Dach, R., S. Schaer, S. Lutz, C. Baumann, H. Bock, E. Orliac, L. Prange, D. Thaller, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, A. Wiget, G. Weber, H. Habrich, W. Söhne, J. Ihde, P. Steigenberger, U. Hugentobler (2014): Center for Orbit Determination In Europe, in *IGS Technical Report 2013*, edited by R. Dach and Y. Jean, pp. 21-34, IGS Central Bureau.

Dach, R., S. Schaer, S. Lutz, D. Arnold, H. Bock, E. Orliac, L. Prange, A. Villiger, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, A. Wiget, D. Thaller, H. Habrich, W. Söhne, J. Ihde, P. Steigenberger, U. Hugentobler (2015): Center for Orbit Determination In Europe, in *IGS Technical Report 2014*, edited by Y. Jean and R. Dach, pp. 21-34, IGS Central Bureau.

Dach, R., S. Schaer, D. Arnold, E. Orliac, L. Prange, A. Sušnik, A. Villiger, A. Maier, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, A. Wiget, A. Rülke, D. Thaller, H. Habrich, W. Söhne, J. Ihde, U. Hugentobler (2016): Center for Orbit Determination In Europe, in *IGS Technical Report 2015*, edited by Y. Jean and R. Dach, pp. 25-44, IGS Central Bureau and University of Bern, Bern Open Publishing, June 2016, DOI: 10.7892/boris.80307.

Dach, R., S. Schaer, D. Arnold, E. Orliac, L. Prange, A. Sušnik, A. Villiger, A. Maier, L. Mervart, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, A. Wiget, A. Rülke, D. Thaller, H. Habrich, W. Söhne, J. Ihde, U. Hugentobler (2017): Center of Orbit Determination in Europe, in *IGS Technical Report 2016*, edited by A. Villiger and R. Dach, pp. 25-44, IGS Central Bureau and University of Bern, Bern Open Publishing, May 2017, DOI: 10.7892/boris.99278.

Dach, R., S. Schaer, D. Arnold, E. Orliac, L. Prange, A. Sušnik, A. Villiger, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, A. Wiget, J. Dostal, D. Thaller, W. Söhne, J. Bouman, I. Selmke, U. Hugentobler (2018): Center of Orbit Determination in Europe, in *IGS Technical Report 2017*, edited by A. Villiger and R. Dach, pp. 32-44, IGS Central Bureau and University of Bern, Bern Open Publishing, June 2018, DOI: 10.7892/boris.116377.

Dach, R., S. Schaer, D. Arnold, L. Prange, D. Sidorov, A. Sušnik, P. Stebler, A. Villiger, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, U. Wild, M. Nicodet, J. Dostal, D. Thaller, W. Söhne, J. Bouman, I. Selmke, U. Hugentobler (2019): Center of Orbit Determination in Europe, in *IGS Technical Report 2018*, edited by A. Villiger and R. Dach, pp. 31-46, IGS Central Bureau and University of Bern, Bern Open Publishing, July 2019, DOI: 10.7892/boris.130408.

Dach, R., S. Schaer, D. Arnold, L. Prange, D. Sidorov, P. Stebler, A. Villiger, A. Jäggi, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, U. Wild, M. Nicodet, J. Dostal, D. Thaller, W. Söhne, J. Bouman, I. Selmke, U. Hugentobler (2020): Center of Orbit Determination in Europe, in *IGS Technical Report 2019*, edited by A. Villiger and R. Dach, pp. 39-56, IGS Central Bureau and University of Bern, Bern Open Publishing, May 2020, DOI 10.7892/boris.144003.

Dach, R., S. Schaer, D. Arnold, M. Kalarus, L. Prange, D. Sidorov, P. Stebler, A. Villiger, **A. Jäggi**, G. Beutler, E. Brockmann, D. Ineichen, S. Lutz, U. Wild, M. Nicodet, D. Thaller, J. Dostal, W. Söhne, J. Bouman, I. Selmke, U. Hugentobler (2021): Center of Orbit Determination in Europe, in *IGS Technical Report 2024*, edited by A. Villiger and R. Dach, pp. 49-66, IGS Central Bureau and University of Bern, Bern Open Publishing, June 2020, DOI: 10.48350/156425.

Hugentobler, U., S. Schaer, G. Beutler, H. Bock, R. Dach, A. Jäggi, M. Meindl, C. Urschl, L. Mervart, M. Rothacher, U. Wild, A. Wiget, E. Brockmann, D. Ineichen, G. Weber, H. Habrich, C. Boucher (2004): CODE IGS Analysis Center Technical Report 2002, in *IGS 2001-2002 Technical Reports*, edited by K. Gowey, R. Neilan, and A. Moore, pp 43-51, IGS Central Bureau.

Hugentobler, U., M. Meindl, G. Beutler, H. Bock, R. Dach, A. Jäggi, C. Urschl, L. Mervart, M. Rothacher, S. Schaer, E. Brockmann, D. Ineichen, A. Wiget, U. Wild, G. Weber, H. Habrich, C. Boucher (2006). CODE IGS Analysis Center Technical Report 2003/2004. in *IGS 2004 Technical Reports*, Jet Propulsion Laboratory, Pasadena, California USA IGS Central Bureau.

Pail, R., T. Fecher, A. Jäggi, H. Goiginger (2011a): Can GOCE help to improve temporal gravity field estimates?, in *Proceedings of the 4th International GOCE User Workshop*, ESA SP-696.

Pail, R., H. Goiginger, W.-D. Schuh, E. Höck, J.M. Brockmann, T. Fecher, T. Mayer-Gürr, J. Kusche, A. Jäggi, L. Prange, D. Rieser, W. Hausleitner, A. Maier, S. Krauss, O. Baur, I. Krasbutter, T. Gruber (2011b): Combination of GOCE data with complementary gravity field information, in *Proceedings of the 4th International GOCE User Workshop*, ESA SP-696.

Ploner, M., A. Jäggi, J. Utzinger (2012a): Skyguide and Flarm - 2 in-sky-laser-safety systems used at Zimmerwald, in *Proceedings of the 17th International Workshop on Laser Ranging*, 48, pp. 245-247, Bundesamt für Kartographie und Geodäsie.

Ploner, M., A. Jäggi, P. Lauber, M. Prohaska, T. Schildknecht, J. Utzinger (2012b): SLR Tracking of GNSS Constellations at Zimmerwald, in *Proceedings of the International Technical Laser Workshop 2012*, ITLW-12.

Ploner, M., P. Lauber, M. Prohaska, P. Schlatter, J. Utzinger, T. Schildknecht, A. Jäggi (2014a): The new CMOS Tracking Camera used at the Zimmerwald Observatory, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Ploner, M., J. Utzinger, P. Lauber, M. Prohaska, P. Schlatter, P. Ruzek, T. Schildknecht, K. Sośnica, A. Jäggi (2014): Status of the Zimmerwald SLR station, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Ploner, M., P. Lauber, M. Prohaska, P. Ruzek, T. Schildknecht, A. Jäggi (2015): History of the Laser Observations at Zimmerwald, in *Proceedings of the 19th International Workshop on Laser Ranging*, Annapolis, Maryland, USA.

Prange, L., A. Jäggi, G. Beutler (2011): Global gravity field determination based on CHAMP-GPS-data, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by U. Marti, pp. 47-48, Section 2 (Gravity Field), Swiss Geodetic Commission.

Rummel, R., G. Beutler, A. Jäggi (2009): Satellite geodesy, in *Annual Report 2007/2008, TUM Institute for Advanced Study*, edited by S. Hofmann and M. Jaeger, pp. 62-67, Institute for Advanced Study, Technische Universität München.

Schildknecht, T., A. Jäggi, M. Ploner, E. Brockmann (2011): The Zimmerwald Observatory, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by A. Wiget, pp. 15-17, Section 1 (Reference Frames), Swiss Geodetic Commission.

Sośnica, K., D. Thaller, R. Dach, A. Jäggi, G. Beutler (2012a): Availability of SLR Normal Points at ILRS Data Centers, in *Proceedings of the 17th International Workshop on Laser Ranging*, 48, pp. 365-368, Bundesamt für Kartographie und Geodäsie.

Sośnica, K., D. Thaller, R. Dach, A. Jäggi, C. Baumann, G. Beutler (2012b): The Blue-Sky effect, in *Proceedings of the International Technical Laser Workshop 2012*, ITLW-12.

Sośnica, K., D. Thaller, A. Jäggi, R. Dach, C. Baumann, G. Beutler (2012c): Can we improve LAGEOS solutions by combining with LEO satellites?, in *Proceedings of the International Technical Laser Workshop 2012*, ITLW-12.

Sośnica K., C.J. Rodriguez-Solano, D. Thaller, A. Jäggi, R. Dach, G. Beutler (2014a): Impact of Earth Radiation Pressure on LAGEOS Orbits and on the Global Scale, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Sośnica K., C. Baumann, D. Thaller, A. Jäggi, R. Dach (2014b): Combined LARES-LAGEOS Solutions, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Sośnica K., A. Jäggi, D. Thaller, U. Meyer, C. Baumann, R. Dach, G. Beutler (2014): Earth gravity field recovery using GPS, GLONASS, and SLR satellites, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Sośnica K., A. Jäggi, D. Thaller, R. Dach, G. Beutler, C. Baumann (2014): SLR-derived terrestrial reference frame using the observations to LAGEOS-1/2, Starlette, Stella, and AJISAI, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Sośnica, K., A. Jäggi, D. Thaller, R. Dach, U. Meyer (2015): Earth Rotation and Gravity Field Parameters from Satellite Laser Ranging, in *Proceedings of the 19th International Workshop on Laser Ranging*, Annapolis, Maryland, USA.

Sośnica, K., R. Dach, D. Thaller, A. Jäggi, G. Beutler, D. Arnold (2015): Processing 20 years of SLR observations to GNSS satellites, in *Proceedings of the 19th International Workshop on Laser Ranging*, Annapolis, Maryland, USA.

Thaller, D., K. Sośnica, G. Beutler, R. Dach, A. Jäggi (2011): Combining SLR and GNSS measurements, in *Swiss National Report on the Geodetic Activities in the years 2007-2011*, edited by A. Wiget, pp. 12-14, Section 1 (Reference Frames), Swiss Geodetic Commission.

Thaller, D., K. Sośnica, R. Dach, A. Jäggi, M. Mareyen, B. Richter, G. Beutler (2012a): GNSS satellites as co-locations for a combined GNSS and SLR analysis, in *Proceedings of the 17th International Workshop on Laser Ranging*, 48, pp. 82-86, Bundesamt für Kartographie und Geodäsie.

Thaller, D., K. Sośnica, R. Dach, A. Jäggi, G. Beutler (2012b): LAGEOS-ETALON solutions using the Bernese Software, in *Proceedings of the 17th International Workshop on Laser Ranging*, 48, pp. 333-336, Bundesamt für Kartographie und Geodäsie.

Thaller, D., K. Sośnica, R. Dach, A. Jäggi, C. Baumann (2012c): The space tie between GNSS and SLR, in *Proceedings of the International Technical Laser Workshop 2012*, ITLW-12.

Thaller, D., K. Sośnica, R. Dach, A. Jäggi, C. Baumann (2012d): SLR residuals to GPS / GLONASS and combined GNSS-SLR analysis, in *Proceedings of the International Technical Laser Workshop 2012*, ITLW-12.

Thaller, D., O. Roggenbuck, K. Sośnica, P. Steigenberger, M. Mareyen, Ch. Baumann, R. Dach, A. Jäggi (2014): SLR-GNSS analysis in the framework of the ITRF2013 computation, in *Proceedings of the 18th International Workshop on Laser Ranging*, Fujiyoshida, Japan.

Visser, P., J. van den IJssel, T. van Helleputte, H. Bock, A. Jäggi, G. Beutler, U. Hugentobler, D. Švehla (2007): Rapid and precise orbit determination for the GOCE satellite, in *Proceedings of the 3rd International GOCE User Workshop*, edited by K. Fletcher, pp 235-239, ESA SP-627, ESA Publications Division, ISBN 92-9092-938-3.

Visser, P., J. van den IJssel, T. van Helleputte, H. Bock, A. Jäggi, G. Beutler, M. Heinze (2010): Rapid and Precise Orbit Determination for the GOCE Satellite, in *Proceedings of the ESA Living Planet Symposium*, ESA SP-686.

van Dam, T., M. Weigelt, A. Jäggi (2015): A Warmer World. *Science & Technology*, Pan European Networks (14), 58-59.

van den IJssel, J., P. Visser, E. Doornbos, U. Meyer, H. Bock, A. Jäggi (2011): GOCE SSTI L2 tracking losses and their impact on POD performance, in *Proceedings of the 4th International GOCE User Workshop*, ESA SP-696.

Wermuth, M., A. Hauschild, O. Montenbruck, A. Jäggi (2010): TerraSAR-X rapid and precise orbit determination, in *Proceedings of the 21<sup>st</sup> International Symposium on Space Flight Dynamics*.

## Data products

Arnold, D.; A. Jäggi (2020): AIUB GRACE kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/GRACE](http://www.aiub.unibe.ch/download/LEO_ORBITS/GRACE), DOI: 10.48350/158372.

Arnold, D.; A. Jäggi (2020): AIUB GRACE-FO kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/GRACE-FO](http://www.aiub.unibe.ch/download/LEO_ORBITS/GRACE-FO), DOI: 10.7892/boris.147231.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-1A kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-1A](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-1A), DOI: 10.7892/boris.145822.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-1B kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-1B](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-1B), DOI: 10.7892/boris.145906.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-2A kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-2A](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-2A), DOI: 10.7892/boris.146129.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-2B kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-2B](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-2B), DOI: 10.7892/boris.146133.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-3A kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-3A](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-3A), DOI: 10.7892/boris.147286.

Arnold, D.; A. Jäggi (2020): AIUB Sentinel-3A kinematic orbits, release 01. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/Sentinel-3B](http://www.aiub.unibe.ch/download/LEO_ORBITS/Sentinel-3B), DOI: 10.7892/boris.147287.

Arnold, D.; A. Jäggi (2020): AIUB Swarm kinematic orbits, release 03. Published by Astronomical Institute, University of Bern. [http://www.aiub.unibe.ch/download/LEO\\_ORBITS/SWARM](http://www.aiub.unibe.ch/download/LEO_ORBITS/SWARM), DOI: 10.48350/158373.

Dach, R., S. Schaer, D. Arnold, M.S. Kalarus, L. Prange, P. Stebler, A. Villiger, A. Jäggi (2020): CODE final product series for the IGS. Published by Astronomical Institute, University of Bern. URL: <http://www.aiub.unibe.ch/download/CODE>, DOI: 10.7892/boris.75876.4.

Dach, R., S. Schaer, D. Arnold, M.S. Kalarus, L. Prange, P. Stebler, A. Villiger, A. Jäggi (2020): CODE rapid product series for the IGS. Published by Astronomical Institute, University of Bern. URL: <http://www.aiub.unibe.ch/download/CODE>, DOI: 10.7892/boris.75854.4.

Dach, R., S. Schaer, D. Arnold, M.S. Kalarus, L. Prange, P. Stebler, A. Villiger, A. Jäggi (2020): CODE ultra-rapid product series for the IGS. Published by Astronomical Institute, University of Bern. URL: <http://www.aiub.unibe.ch/download/CODE>, DOI: 10.7892/boris.75676.4.

Encarnaçāo, J., P. Visser, A. Jäggi, A. Bezdek, T. Mayer-Gürr, C.K. Shum, D. Arnold, E. Doornbos, E. Matthias, J. Guo, J. van den IJssel, E. Iorfida, J. Klokočník, S. Krauss, X. Mao, U. Meyer, J. Sebera, C. Zhang, Y. Zhang, C. Dahle (2019): Multi-approach Gravity Field Models from Swarm GPS data. GFZ Data Services. URL: [http://icgem.gfz-potsdam.de/series/02\\_COST-G/Swarm](http://icgem.gfz-potsdam.de/series/02_COST-G/Swarm), DOI: 10.5880/ICGEM.2019.006.

Lasser, M., U. Meyer; D. Arnold, A. Jäggi (2020): AIUB-GRACE-FO-operational - Operational GRACE Follow-On monthly gravity field solutions. GFZ Data Services. URL: [http://icgem.gfz-potsdam.de/series/03\\_GRACE\\_other/AIUB/AIUB-GRACE-FO\\_op](http://icgem.gfz-potsdam.de/series/03_GRACE_other/AIUB/AIUB-GRACE-FO_op), DOI: 10.5880/icgem.2020.001.

Meyer, U., A. Jäggi, C. Dahle, F. Flechtner, A. Kvas, S. Behzadpour, T. Mayer-Gürr, J.-M. Lemoine, S. Bourgogne (2020): International Combination Service for Time-variable Gravity Fields (COST-G) Monthly GRACE Series V. 01. GFZ Data Services. URL: [http://icgem.gfz-potsdam.de/series/02\\_COST-G/GRACE](http://icgem.gfz-potsdam.de/series/02_COST-G/GRACE), DOI: 10.5880/ICGEM.COST-G.001.

Meyer, U., M. Lasser, A. Jäggi, C. Dahle, F. Flechtner, A. Kvas, S. Behzadpour, T. Mayer-Gürr, J.-M. Lemoine, I. Koch, J. Flury, S. Bourgogne (2020): International Combination Service for Time-variable Gravity Fields (COST-G) Monthly GRACE-FO Series. GFZ Data Services. URL: [http://icgem.gfz-potsdam.de/series/02\\_COST-G/Grace-FO](http://icgem.gfz-potsdam.de/series/02_COST-G/Grace-FO), DOI: 10.5880/ICGEM.COST-G.002.

Prange, L., D. Arnold, R. Dach, M.S. Kalarus, S. Schaer, P. Stebler, A. Villiger, A. Jäggi (2020): CODE product series for the IGS MGEX project. Published by Astronomical Institute, University of Bern. URL: <http://www.aiub.unibe.ch/download/CODE>, DOI: 10.7892/boris.75882.

Sušnik, A., R. Dach, A. Villiger, A. Maier, D. Arnold, S. Schaer, A. Jäggi (2016): CODE reprocessing product series. Published by Astronomical Institute, University of Bern. URL: [http://www.aiub.unibe.ch/download/REPRO\\_2015](http://www.aiub.unibe.ch/download/REPRO_2015); DOI: 10.7892/boris.80011.