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Nota di contenuto	Part I – Reference Systems and Frames -- Opportunities with VLBI Transmitters on Satellites -- Formation of a GNSS Network in Space Based on Simulated LEO Constellations -- Practical Considerations of VLBI Observations to the GENESIS Mission -- Terrestrial Datum Definition Methods in VLBI Global Solutions -- On the Potential of Accelerometers for GNSS on Satellite Positioning and Ensuing Reference Frame Determination -- On DORIS Precise Orbit and Reference Frame Determination Based on the ITRF2020 Using Multiple Altimetry Satellite Missions -- Realisation of the Non-rotating Terrestrial Reference Frame by an Actual Plate Kinematic and Crustal Deformation Model (APKIM2020) -- A Functional Model for Quantifying Deformation in Reference Frame Transformations -- Combined Global GNSS Velocity Field -- Geophysical Loading Correction Comparison and Assessment in VLBI Analysis -- Exploring Non-tidal Atmospheric Loading Deformation Correction in GNSS Time Series Analysis Using GAMIT/GLOBK Software -- Relevance of PSInSAR Analyses at ITRF Co-location Sites -- The DIA-estimator for Positional Integrity: Design and Computational Challenges -- EPOS-OC, a Universal Software Tool for

Satellite Geodesy at GFZ -- Part II – Earth Rotation -- Impact of Free Core Nutation Modeling on the Estimation of Earth Rotation Parameters from Different VLBI Session Types -- Consistently Combined Earth Orientation Parameters at BKG - Extended by New VLBI Intensives Data -- Operational Forecasting of Effective Angular Momentum Functions Fourteen Days Ahead -- Hourly Earth Rotation Parameter Series from GPS and Galileo Observations, and Estimations of Tidal Effects -- EOP Prediction Based on Multi and Single Technique Space Geodetic Solution -- Part III – Gravity Field Modelling and Height Systems -- On the Treatment of Static Gravity Field Signal for Time-Variable Gravity Field Recovery -- Analysis of Novel Sensors and Satellite Formation Flights for Future Gravimetry Missions -- Automated Anomaly and Outlier Detection in GRACE and GRACE Follow-On Post-fit Residuals Using Machine Learning -- Impact of a Priori Gravity Field Models on SLR Data Processing -- Dynamical Evaluation of Gravity Spherical Harmonic Coefficients Due to Generally Shaped Polyhedra -- Optimizing Airborne Flight Line Spacing for Geoid Determination with Full Gravity Vectors -- Update of the Atmospheric Attraction Computation Service (Atmacs) for High-Precision Terrestrial Gravity Observations -- Geoid Computation for the Future Circular Collider at CERN -- Meteorite Impact Origin of Yangju Circular Structure in the Middle Part of the Korean Peninsula Estimated by Gravity Field Interpretation -- Achievements of the GGOS Focus Area Unified Height System -- Operational Infrastructure to Ensure the Long-Term Sustainability of the International Height Reference System and Frame – IHRF/IHRF -- Estimation of the Argentinean Vertical Datum Parameter with Respect to the International Height Reference Frame (IHRF) -- Densification of the IHRF in Denmark, The Faroe Islands, and Greenland -- Part IV – Monitoring Sea Level Changes by Satellite and In-Situ Measurements -- The Impact of Different Geophysical Corrections on Altimetry-Derived Sea Level Rise Estimates - Wet Troposphere -- Bathymetry Estimation from ICESat-2 in a Region Swamped by Mud – A Case Story from Moreton Bay -- Performance Analyses of Sentinel-3A and Sentinel-3B over Lake Issyk Kul (Kyrgyzstan) -- Vision of a Clock-based Network for Absolute Sea Level Monitoring -- Part V – Monitoring and Understanding the Dynamic Earth with Geodetic Observations -- Towards Clock Ties for a Global Geodetic Observing System -- Assessment of the Tropospheric Delay Coefficients at Co-Located Sites with VGOS and GNSS -- Real-Time GNSS Integrated Water Vapor Sensing Based on Time Series Correction Deep Learning Model -- Analyzing the 3D Deformation Induced by Non-Tidal Loading in GNSS Time Series in Finland -- A Geodetic Analysis of ACC Volume Transport with Satellite Data -- A Pipeline to Explore Transient Signals in GNSS Data: A Preliminary Approach Applied to the Cascadia Subduction Margin -- Emphasizing the Value of Geodesy to Science and Society Through IAG-GGOS -- EPOS-GNSS Data Quality Monitoring Web Portal -- The GGXF Standard File Format for Gridded Geodetic Data -- Signal Decomposition with InSAR Displacement Time Series Above a Storage Cavern Field: Example Epe (NRW, Germany).

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### Sommario/riassunto

This open access volume contains 46 selected papers from the symposia organised or co-organised by the International Association of Geodesy (IAG) in the framework of the 28th General Assembly of the International Union of Geodesy and Geophysics (IUGG). The conference was held in Berlin, Germany, from 11 to 20 July under the theme "Together again in the geosciences". It marked a return to face-to-face meetings after the pandemic restrictions. A total of 4,884 participants from 100 countries attended, of whom 607 registered for the IAG. The Assembly featured a total of 3,200 oral presentations and 1,300 poster

presentations, of which 661 were related to the IAG.

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