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For more than two decades, CNES has been developing and distributing Level-2 time-variable gravity models for the international scientific community, notably through the International Center for Global Gravity Field Models (ICGEM) and the International Combination Service for Time-variable Gravity Fields (COST-G). Building on this expertise, in the framework of the National Data Hub FormaTerre of the Research Infrastructure Data Terra, the SAGSA (Service of Activities for Space Gravimetry and Applications) project, funded by CNES and led by Magellium, aims to establish a Space Gravimetry Data and Services Center. This center will be dedicated to monitoring temporal and spatial variations in Earth’s gravity field from GRACE and GRACE-FO observations, and to providing advanced gravity products for the scientific community. Within SAGSA, Magellium, in close collaboration with CNES, is responsible for the operational production of CNES Level-2 nominal and unconstrained gravity models, distributed both as spherical harmonics and gridded products. These models form the foundation for Level-3 ensemble models, generated by combining CNES solutions with those from other processing centers, thereby offering datasets tailored to the needs of the hydrology, oceanography, solid-earth deformations, and glaciology communities. Such models support investigations of large-scale geodynamic processes, including the global water cycle, continental ice mass loss, and sea-level rise. Furthermore, Level-4 products are being developed by integrating space gravimetry with complementary Earth observation data, such as satellite altimetry, to monitor essential climate variables including ocean heat content and Earth’s energy imbalance. To ensure long-term accessibility and usability, SAGSA will also implement a dedicated data and service infrastructure, guaranteeing the systematic identification, distribution, and documentation of all CNES gravity products, from Level-1B to Level-4.
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