

IAF EARTH OBSERVATION SYMPOSIUM (B1)
International Cooperation in Earth Observation Missions (1)

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25 YEARS OF INTERNATIONAL COOPERATION OF GRAVITY MISSIONS

Abstract

The GRACE and GRACE-FO Earth observatories, launched in 2002 and 2018 respectively, have forever changed the collective understanding of scientists and society of Earth's water resources and its water cycle (terrestrial water, glacier ice, and sea level change). The results from these missions have underscored the critical role the global water cycle plays in understanding and monitoring Earth's climate system. The overwhelming success of these gravity missions is a result of a concerted effort among governments, their space agencies, and research organizations to enable these essential observations of how the Earth is evolving as a system and the future of it. In particular, the international cooperation among the National Aeronautics and Space Administration, (NASA), the German Aerospace Centre (DLR), the Jet Propulsion Laboratory (JPL), the German Research Centre for Geosciences (GFZ), Airbus DS, and ONERA (The French Aerospace Lab), have provided the world's science community with nearly uninterrupted water cycle and climate data for nearly 20 years. And even now, third generation gravity measurement architectures are being explored to continue the legacy of these invaluable on orbit observations allowing the world's science community to study short and long term trends in global climate change.