

The Global Geodetic Observing System (GGOS) - its Role and its Activities

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The Global Geodetic Observing System (GGOS) has been organized under the International Association of Geodesy (IAG) since 1999 to work with the IAG components to provide the geodetic infrastructure necessary for monitoring the Earth system and global change for both scientific research and to help give us the opportunity to make intelligent decisions for societal benefit. Observations include those of the Earth's shape, gravity field and rotational motion, and those such as precision satellite orbits to support space based systems (such as altimetry and gravity sensors). GGOS contributes to the emerging Global Earth Observing System of Systems (GEOSS) not only with the accurate reference frame required for many components of GEOSS but also with observations related to the global hydrological cycle, the dynamics of atmosphere and oceans, and natural hazards and disasters.

GGOS advocates for implementation of core and co-location network sites to satisfy GGOS requirements, monitors the present state of the networks and projects their future status, and supports and encourages maintenance and improvement in the infrastructure critical for the development of data products essential to GGOS.

GGOS is focused on the IAG Services and the products they derive on an operational basis for Earth monitoring making use of various space geodetic observation techniques such as VLBI, SLR/LLR, GNSS, DORIS, altimetry, gravity satellite missions, etc. GGOS builds upon existing observing and processing systems of the IAG, supporting its goal of obtaining products of highest possible accuracy, consistency, and temporal and spatial resolution, which should refer to a consistent reference frame, stable over decades in time. To achieve these important IAG goals, GGOS supports the fundamental requirement that common standards and conventions are used by all IAG components for the analysis of the different geometric and gravimetric observations.

In this talk, we will discuss the role of GGOS, its current status and structure, and plans as we move forward.

Keywords: Space Geodesy, VLBI, SLR, GNSS, Gravity, Co-located geodetic measurements