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Update on the Activities of the GGOS Bureau of Networks and Observations

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The GGOS Bureau of Networks and Observations works with the IAG Geometric Services (IVS, ILRS, IGS, and IDS) to advocate for the expansion and upgrade of space geodesy networks for the maintenance and improvement of the reference frame and other application, as well as for the integration with other techniques, including absolute gravity and sea level measurements from tide gauges. New sites are being established following the GGOS concept of “core” and co-location sites, and new technologies are being implemented to enhance performance in data yield as well as accuracy. The Bureau continues to meet with organizations to discuss possibilities, including partnership, for new and expanded participation.

The Bureau provides the opportunity for representatives from the services to meet and share progress and plans, and to discuss issues of common interest. It also monitors the status and projects the evolution of the network based on information from the current and expected future participants.Of particular interest at the moment is the integration of gravity and tide gauge networks and the forthcoming establishment of the new absolute gravity reference system/frame.

The Committees and Joint Working Groups play an essential role in the Bureau activity. The Standing Committee on Performance Simulations and Architectural Trade-off (PLATO) uses simulation and analysis techniques to project future network capability and to examine trade-off options. The Committee on Data and Information is working on a strategy for a GGOS metadata system on a near-term plan for data products and a more comprehensive long-term plan for an all-inclusive system. The Committee on Satellite Missions is working to enhance communication with the space missions, to advocate for missions that support GGOS goals and to enhance ground systems support. The IERS Working Group on Site Survey and Co-location (also participating in the Bureau) is working to enhance standardization in procedures, outreach and to encourage new survey groups to participate, and improve procedures to determine systems’ reference points and to detect technique specific systematic errors.

A major task during the past year was the formulation of a network projection of stations and technologies over the next 5 and 10 years. This has been developed for use in simulations to estimate future network capability in addressing the reference frame and other requirements.

We will review the progress over the past year including the network projection model.