We are soliciting abstracts for the twelve poster session focus area of the 2012 IGS Workshop.
These twelve focus areas are described below. Abstracts for these posters will be accepts from March 25 - April 30, 2012.

P1 - The IGS Multi-GNSS Experiment (MGEX)

The IGS (International GNSS Service) is deeply involved in GNSS tracking, analysis and production of products for applications requiring the utmost accuracy. The Service provides the highest quality GNSS data and products in support of the terrestrial reference frame, Earth rotation, Earth observation and research, positioning, navigation and timing and other applications that benefit society. Up to now IGS operations have focused solely on signals provided by the GPS and GLONASS systems. In the future the IGS will take advantage of new satellite navigation systems. To facilitate this endeavour a test experiment (MGEX) has been launched in order to expand tracking capabilities and to support improved GNSS data analyses. This campaign encourages data analysts to investigate the quality of the measurements made using the new signals and the potential of processing multiple GNSS data sets. The campaign is also viewed as a means of fostering participation and cooperation with international space agencies and research organizations. Last but not least, MGEX is a first step to upgrade, on a mid-term basis, the current IGS tracking network to a real Multi-GNSS tracking network.

Poster presentations dealing with the set-up or upgrade of MGEX sites, MGEX Data archiving and handling of both RINEX- and RT-data streams as well as first data analysis results achieved by processing MGEX observation data are very much appreciated.

Submit Abstract

P2 - Space Vehicle Orbit Dynamics and Attitude

Topics of interest: Orbit determination; Orbit prediction; Force modelling; attitude modelling and estimation; Tests of new space vehicles (GPS IIF, Galileo IOV, Compass, GLONASS IIM); Laser ranging to space vehicles; Orbit quality tests; Developments in gravity field models; impacts of orbit modelling improvements on reference frame estimation and modelling; impacts of observable modelling improvements on orbit determination; Draconitic period effects; Day boundary effects analysis and studies of long term trends within orbit products derived from REPRO activities; satellite clock modelling.

Submit Abstract

P3 - Ionosphere Observations and Modelling

Space geodetic techniques such as GNSS (ground- and satellite-based), DORIS, VLBI, satellite altimetry or the GPS radio occultation missions (e.g Formosat-3/COSMIC, TerraSAR-X, OCEANSAT2) can provide valuable information on the electron density. The potential for ionospheric sensing using these techniques has improved considerably over the last few years as a result of technological advances, larger ground networks and developments of appropriate models and algorithms. Accurate ionospheric estimates and retrievals based on these techniques may significantly improve our understanding on the physical and dynamic characteristics of electron density and space weather at various scales. Consequently, contributions on physical modelling of the ionosphere are
highly appreciated.

This session will be a forum for discussing sources of systematic errors that limit the accuracy of GNSS-derived ionosphere models and products. Session topics include dealing with possible improvements of the IGS ionospheric products, methods to correct for higher-order ionospheric delays in GNSS, occultation measurements, inter-frequency bias calibrations, etc. The session also includes a summary of the activities of the IGS Ionosphere Working Group.

Submit Abstract

P4 - Infrastructure and Data Centers

The Infrastructure Committee invites posters covering infrastructure issues to showcase novel station installations, station installation lessons learned , IGS infrastructure details comparison and analysis, etc. The authors are encouraged to present their work with emphasis on IGS-wide applications and best practices, and analyzing the elements of the current IGS network. The archives of the IGS data centers have become increasingly important to diverse international user communities. The data centers not only support the operational infrastructure of the service but also the many working groups and pilot projects established within the IGS. The IGS Data Center Working Group (DCWG) addresses the problems facing the IGS data centers as well as develops new ideas to aid users both internal and external to the IGS. This poster session will focus on recent data center developments, data center support of the IGS M-GEX campaign, data center related developments in real-time, data center topics related to the IGS Infrastructure, utilities developed for data discovery, and other general data center topics.

Submit Abstract

P5 - Biases and Calibrations

This session focuses on the overall treatment of GNSS biases, including inter-system and inter-frequency biases. Contributions of interest include those discussing the status of the determination and handling of GNSS biases; lessons learned with respect to multi-GNSS, including extended ambiguity resolution and consistent clock estimation; biases relevant to undifferenced integer fixing; biases in current and new signals, observables, and GNSS constellations; exchange formats for
GNSS bias values; possible harmonization of GNSS biases (e.g., one correction for each specific observable); homogenization with respect to observables provided by GNSS receivers (how to deal with the plethora of observables?).

Submit Abstract

P6 - Estimation and Application of GNSS-based Troposphere Delay

In order to obtain centimeter position accuracy from GNSS measurements, it is necessary to estimate the excess path delay encountered by GNSS signals as they pass through the neutral atmosphere (troposphere). One can treat the so-called troposphere delay as a nuisance parameter (estimate and discard), or use the GNSS measurements as a means to obtain troposphere delay estimates, which in turn can be used to estimate meteorological parameters such as precipitable water (PW). In short, GNSS measurements can be applied to meteorology or climate-change studies. The former requires a high spatial density of stations and real-time or near-real-time troposphere estimate production. The latter requires long-term homogeneity of models, so that trends can be safely attributed to climate change as opposed to processing artifacts.

In this session, we welcome submissions related to GNSS-based troposphere delay: computation/distribution of estimates, research into mapping functions and models, applications of troposphere estimates to meteorology/climate change/atmospheric studies, comparison of GNSS-based estimates with those obtained from other methods (e.g., radiometry, VLBI,

numerical weather models), impact of troposphere delay estimates on timing or positioning, and other topics.

Submit Abstract

P7 - Real-Time Services and Applications

The IGS is preparing to launch an official real-time service. This session will demonstrate the current state of readiness of the Real-time IGS Service. Elements of the Service and its user community will be highlighted. Station operators are invited to describe their data gathering and distribution methods, and any planned enhancements to their operations. Both real-time analysis and associated analysis centers have the opportunity to describe their current data analysis and processing strategies, and planned improvements. Presentations describing GNSS data and correction formats that support all GNSS signals and provide the accuracy required for the most demanding geodetic applications are being solicited, as are presentations demonstrating product combination strategies and robust data and product delivery methods. Of particular interest will be presentations from real-time user communities demonstrating how IGS real-time products are being used.

Submit Abstract

P8 - Antenna Calibrations

Generally, the absolute IGS antenna phase center calibrations that were adopted in 2006 and recently updated with respect to the IGS08 reference frame (igs08.atx) show good behavior. However, there are still opportunities to improve these calibrations. The combined processing of terrestrial and low-Earth orbiter data has the potential to determine transmitter antenna phase center calibrations without constraints to the terrestrial scale while also extending the range of available nadir angles. Furthermore, it may be possible to include azimuth-dependent calibrations. For new generations of GNSS satellites it is important to derive accurate antenna calibrations from limited data, especially if ground calibrations are not available.

For receiver antennas, the number of institutions providing independent calibrations has been increasing, while the anechoic chamber is providing calibrations for future frequencies. In order to avoid systematic errors, calibrations from a variety of institutions and techniques should be carefully compared. In addition, the development of techniques to mitigate near- and far-field multipath is also important.

Submit Abstract

P10 - Analysis Combination Center and Reference Frame

The IGS Analysis Combination Center and Reference Frame Working Group welcome contributions on a variety of topics, including:

- Preliminary results for the second IGS reprocessing campaign (repro2), including studies of the impact of switching to daily TRFs.
- Quality assessments of IGS products and recommendations for improving the combined products.
- Progress on development of the ACC2.0 combination software, including improved methods for better internal consistency of IGS products.

- Ideas for improvements in combination procedures.
- Any new ACs or summaries of contributed products from existing ACs, including descriptions of latest developments, etc.
- Suggestions for reducing rotational scatter in IGS orbit product lines including best approaches for EOP predictions. The IGU orbits are most sensitive to a priori EOP predictions whereas for the others intra-AC self-consistency is probably most important. Does the switch to daily Final products result in improvements?
- Improvements in the determination and application of integer ambiguities.
- Improved strategies for best SV clock predictions.
- How to conciliate network modernization and reference frame stability?
- Determination of time scales based upon the clock solution contributions from the IGS Analysis Centers

Submit Abstract

P11 - Tide Gauge Benchmark Monitoring

Since the beginning of the GPS era several studies have revealed the uncertainty in the GPS height component. Especially when studying sea level changes, where the GPS height of the benchmark is used to correct sea level time series for vertical motion, rapid displacements, and for defining an absolute sea level datum, problems occur when combining GPS information with sea level time series. Addressing the height component in routine computation and establishing and maintaining new geodetic ties to tide gauge systems will be an important contribution to climate change studies. This session solicits contributions that address the objectives of the IGS Tide Gauge Benchmark Monitoring (TIGA) Working Group, which transitioned from a Pilot Project to Working Group in January 2011. Of interest are contributions that describe the status and development of geocentric coordinates and time series of the TIGA station network on a regular basis, application of GNSS in coastal sea level hazard assessments as well as the status and plans for extending the TIGA network.

Submit Abstract

P12 - General Geodetic and Geophysical Applications of IGS Products

This session solicits general contributions not already covered by other sessions. Example contributions include those describing applications of IGS products from the user community as well as advances in geophysical models that have the potential improve the accuracy of the IGS products. These include, but are not limited to, the diverse range of precise point positioning applications, Earth orientation, surface loading (including tidal and non-tidal), and time transfer, and their respective impact on geodetic results.

Submit Abstract