



IAG Newsletter

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Each IAG Newsletter includes several of the following topics:

- I. General information
- II. Reports of IAG symposia
- III. Reports by commissions, special commissions or study groups
- IV. Symposia announcements
- V. Book reviews
- VI. Fast bibliography

General announcements

IAG updates

Capacity building within SIRGAS

In July 2021 the SIRGAS Working Group 2 was planning an in-person workshop on GAMIT-GLOBK at the *Escuela de Ingeniería y Topografía, University of Costa Rica*. Unfortunately, due to the COVID19 pandemic, the in-person workshop has been postponed for 2022. We are therefore working with the University of Costa Rica on two possible webinars related to geodetic reference frames that will be announced in the following weeks.

The SIRGAS community has also been working with the National Geographic Institute of the Dominican Republic (IGN) to assess the GNSS geodetic infrastructure of the

country. The goal of the assessment is to provide recommendations and training in the following months to consolidate a continuous GNSS network within the country and incorporate these stations to the SIRGAS-CON network. As a long term goal, the IGN plans to implement the SIRGAS-CON reference frame within the Dominican Republic during 2021–2022.

UNGGIM questionnaire on member state's geodetic capacity

The SIRGAS Working Group 2 is working with the UNGGIM Education Training and Capacity Build (ETCB) Working Group to update and implement a questionnaire to understand the current capacity level of the UNGGIM member states. The goal of this questionnaire, which will be distributed in the following months, is to understand the current situation and future prospects of the world geodesy.

Analysis centers

In November 2020, a new experimental center is put into operation at the Military Geographical Institute of Peru with the following characteristics:

Name: Instituto Geográfico Nacional de Perú

Acronym: PER

Software: GAMIT GLOBK 10.71

Process Stations: AACR ABMF ABPW AM04 AMTE AN02 ANDS AP01 AQ01 ARCA AREQ AY02 BECE BEJA BNGA BOGT BRMU CHEP CHET CIQE CJ01 CN19 CN30 COL2 CRLP CRO1 CS01 CULC DARI FQNE GLPS GODE GOL2 GOLD GRE1 GUA HC03 HV01 IC01 ICAM ICEP IDGO INEG IPAZ JU03 LB01 LI01 LIMN LR01 MANA MD01 MDO1 MEDE MERI MEXI MTY2 NAS0 NEIL OAX2 PASM PI01 PIE1 PU02 RDSR RIDC SAGE SCUB SM01 STJO TAMP TC01 TEG2 TOL2 UC01 UCRI UGTO USNO VIL2 VNDP ZARZ

Further, the School of Topography, Cadastre, and Geodesy of the University in Costa Rica is taking the necessary steps to restart its activities as an official SIRGAS processing center.

Finally, approximately 40 stations belonging to NGS and NRCAN were designated to extend the SIRGAS-CON network into North America. We expect to start processing

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these stations during the first half of 2021. Some of these stations are already being processed within the IGS polyhedron which conform the SIRGAS weekly solution. Additionally, the reprocessing of the 2000–2020 period by IGS RNACC-SIR has been completed.

Transformation parameters

We have completed the calculation of three static transformation grids (in NTv2 format) to transform between the SIRGAS95-SIRGAS2000 and SIR17P01 reference frames. We are also working on the generation of a deformation model to transform between SIRGAS' solutions. This model is expected to be completed by the end of 2021.

Scientific project: contributions of high-resolution gravity models in South America

The SIRGAS Working Group 3 is involved with the Technical University of Munich, in Germany, in a scientific project entitled "Contributions of high-resolution gravity models in South America". The project has two objectives: to evaluate the geoid models and GNSS/leveling stations available in South America using high-resolution gravity field models and to combine satellite and ground data to contribute to the computation of the potential at the IHRF (International Height Reference Frame) stations. It is expected that the results obtained will contribute to the study of the unified height system in South America. The project period is July 2020 to October 2021.

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