

Report on the Symposium SIRGAS2019

The current activities, advances, and new challenges of SIRGAS are reported, discussed, and evaluated in the annual SIRGAS Symposia, which have been held since 1993. This year, thanks to the kind invitation extended by the Brazilian Institute of Geography and Statistics (IBGE) and the Rio de Janeiro State University (UERJ), the SIRGAS 2019 Symposium was held in Rio de Janeiro, Brazil, between November 11 to 14, 2019. It was organized with the support of the International Association of Geodesy (IAG) and the Pan-American Institute for Geography and History (PAIGH). In the frame of this Symposium, two additional activities were programmed:

- 1) "GGOS Days 2019" (Global Geodetic Observing System) was held simultaneously in the same venue (Fig. 1) and a joint session between the SIRGAS community and GGOS expert representatives was developed on November 12 (Fig. 1) and;
- 2) The 2nd SLR (Satellite Laser Ranging) Workshop in Latin America took place from November 6 to 8, 2019. The main objective was to continue the integration between SIRGAS community (professionals and scientists) with the group of SLR experts. This effort was the continuation of actions initiated during the 1st SLR SIRGAS workshop held in 2017 in Mendoza, Argentina; which aim was the promotion of the specialization in the SLR technique, as well as data processing and its combination with GNSS (Global Navigation Satellite System) in the Latin American and international geodetic community context.



Fig. 1. GGOS Days attendees 2019



Fig. 2. Participants of the SIRGAS Symposium 2019, IBGE, Rio de Janeiro, Brazil, November 11 to 14, 2019

The SIRGAS Symposium 2019 was attended by 164 participants (Fig. 2) from 16 countries (Argentina, Austria, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, Germany, Mexico, Panama, Spain, United States, Uruguay and Venezuela). The main topics addressed during the symposium included SLR in Latin America, colocation techniques (4 presentations); Studies of the Atmosphere and analysis of the Earth System based on SIRGAS Infrastructure (18 presentations); SIRGAS-GGOS Session (18 presentations); the improvement and maintenance of the SIRGAS reference frame (12 presentations); practical applications aimed at the adoption of SIRGAS at the sub-regional and national level and Infrastructure SIRGAS in Real Time (12 presentations); advances in SIRGAS Unified Vertical Reference System (9 presentations);

gravity and geoid (12 presentations); and general reports (4 presentations). In total, 75 oral contributions and 18 posters were presented.

During the meeting of Directing Council held on November 13, the results of the elections for president and vice president were reported, who formally assumed at the closing ceremony of the Symposium (Fig.3). Other issues discussed during this meeting will be available on the SIRGAS webpage, section "SIRGAS: Resolutions".



Fig. 3. New Executive Committee: Sonia Costa from IBGE (Instituto Brasileiro de Geografia e Estatística), Brazil (president) and Diego Piñón from IGN (Instituto Geográfico Nacional), Argentina (vice president)

Report on the SIRGAS SLR Workshop 2019

The 2nd SLR Workshop in Latin America was attended by 25 participants (Fig. 4) from 8 countries (Argentina, Brazil, Colombia, Costa Rica, Ecuador, Perú, Uruguay and Venezuela). It was organized as an activity of the SIRGAS Working Group I. On this occasion, the instructor was Dr. Daniela Thaller from the BKG, Germany (Fig.5). The SIRGAS Executive Committee thanks the BKG for the possibility of Dr Daniela Thaller qualifying SIRGAS community in the SLR data processing and analysis.



Fig. 4. Participants of the 2nd SIRGAS SLR Workshop, IBGE, Rio de Janeiro, Brazil, November 6 to 8, 2019



Fig. 5. Dr. Daniela Thaller teaching SLR data processing with Bernese software.