



SIRGAS 2011 General Meeting and Third SIRGAS-IAG-PAIGH School on Reference Systems

Heredia, Costa Rica, August 3 - 10, 2011

- Meeting Summary -

SIRGAS (Sistema de Referencia Geocéntrico para las Américas) is the Sub-commission 1.3b (Regional Reference Frame for South and Central America) of the International Association of Geodesy (IAG) and a Working Group of the Cartographic Commission of the Pan American Institute for Geography and History (PAIGH). The integration in IAG provides scientific and technical guidance; the interaction with PAIGH guarantees access to the particular necessities of non-geodetic specialists requiring coordinates of high-precision in the Americas.

The main objectives of SIRGAS are the definition, realization and maintenance of the geocentric reference system for Latin America and the Caribbean, including a gravity field-related vertical reference system. The SIRGAS activities are coordinated by three Working Groups: WG1 (Reference System) is concentrating on the maintenance of the SIRGAS reference frame, which at present is composed by about 250 continuously operating GNSS stations. WG2 (SIRGAS at national level) is in charge of supporting the activities oriented to extending, adopting and using the SIRGAS reference frame in the different SIRGAS member countries, which at present are 18. WG3 (Vertical Datum) deals with the definition and realization of a unified vertical reference system that supports the determination and combination of geometrical and physical heights with high precision.



*Participants of the SIRGAS 2011 General Meeting and
Third IAG-PAIGH-SIRGAS School on Reference Frames
(Heredia, Costa Rica. August 3 - 10, 2011)*

Activities, advances, and new challenges of SIRGAS are reported, discussed, and re-oriented (if necessary) in the SIRGAS yearly meetings, which have been realized since 1993. The SIRGAS 2011 General Meeting was held in Heredia, Costa Rica, between August 8



and 10, 2011. In the week before, from August 3 to 5, the Third IAG-PAIGH-SIRGAS School on Reference Systems took place. The SIRGAS meeting and the School were hosted by the Escuela de Topografía, Catastro y Geodesia of the Universidad Nacional (ETCG-UNA).

The School was attended by 116 participants from 17 countries. It covered the themes:

- Types of coordinates, their definitions, relations and transformations;
- Geodetic reference systems and frames (ICRS/ICRF, ITRS/ITRF, EOP, regional and national densifications of ITRF);
- Determination of precise coordinates (station positions and velocities) using GNSS techniques, including network adjustment and alignment to ITRF;
- Vertical reference systems (geometrical and physical heights, reference surfaces, unification of heights systems);
- Definition, realization, and use of SIRGAS in practice and science.

The SIRGAS Meeting was attended by 144 participants and comprised 55 oral presentations distributed in the following sessions:

- Towards a unified vertical datum for the SIRGAS region;
- National advances within SIRGAS;
- Analysis of the SIRGAS reference frame;
- Impact of seismic events on the SIRGAS reference frame;
- SIRGAS in real time;
- Atmospheric analysis based on the SIRGAS infrastructure.

In the frame of the SIRGAS meeting, a General Assembly of the SIRGAS Directing Council was carried out. This is the main body of SIRGAS and defines the official policies and recommendations of SIRGAS. It is composed by one representative of each member country, one of IAG and one of PAIGH. According to the bylaws, it meets every four years (in the same year as the General Assembly of the IUGG) to elect the SIRGAS authorities, which correspond to the SIRGAS President and Vice-president. In this opportunity, Claudio Brunini (Universidad Nacional de la Plata, Argentina) and Laura Sánchez (Deutsches Geodätisches Forschungsinstitut, Germany) were re-elected for a second term, from 2011 to 2015.

The report of the SIRGAS-President and Vice-president for the previous term (2007-2011), the planned activities for the new period (2011-2015), and the presentations, extended abstracts, and main conclusions of the SIRGAS 2011 General Meeting are described in the SIRGAS Newsletter No. 16, which is available at the SIRGAS web site (www.sirgas.org).

Thanks to the unconditional and generous backing of IAG and PAIGH, it was possible to provide 20 participants from 11 countries with partial travel grants. SIRGAS deeply acknowledges this support.

*Claudio Brunini, SIRGAS President
Laura Sánchez, SIRGAS Vice-president*