

## REPORT FROM XI COLAGE (Eleventh Latin American Conference on Space Geophysics).

From 16<sup>th</sup> to 20<sup>th</sup> of April, 2018, Buenos Aires welcomed the Eleventh Latin American Conference on Space Geophysics (XI Congreso Latinoamericano de Geofísica Espacial or 'XI COLAGE', <http://www.iafe.uba.ar/u/colage11/>). The conference brought together researchers and students from different Space Geophysics disciplines, such as physics of the heliosphere, cosmic rays, Sun-Earth connections, Magnetosphere, Ionosphere, neutral upper Atmosphere, Space Weather, Solar Physics, Space Physics, and Nonlinear Processes in Space Geophysics. This series of conferences is periodically organized by the Latin American Association of Space Geophysics (Asociación Latinoamericana de Geofísica Espacial or ALAGE, [www.alage.org](http://www.alage.org)).

Several research groups in Latin America have made significant contributions to Space Geophysics, complementing theoretical, numerical, and experimental efforts, as well as collaborating in scientific campaigns as part of international programs. This conference was a great opportunity to gather the scientific community to share their last findings and to promote collaboration among researchers.

The conference gathered around 160 assistants with the participation of invited keynote speakers Dr. Juan Roederer (University of Alaska Fairbanks and University of Colorado), Dr. William Matthaeus (University of Delaware) and Dr. Stephen White (Air Force Research Laboratory, USA). During the conference 198 papers were presented, 68 as oral and 130 as poster presentations, distributed along seven sessions: Solar Physics, Solar Wind, Planetary Magnetospheres, Cosmic Rays, Ionosphere and the Upper Atmosphere, Plasma Physics and Space Weather, and Nonlinear Processes in Space Geophysics, and Space Weather.



This conference was a great opportunity for countries that have space weather centers to meet and exchange experiences and lessons learned on regional operations. As result, on 20<sup>th</sup> April the first Space Weather Predictors Meeting (Argentina-Brazil-México) took place and a joint briefing was presented. This activity is aligned to the original spirit of ALAGE that is to enhance Latin American collaboration (<https://www.facebook.com/clezio.denardin/videos/862006164010192/>).

Received by the ISWI Newsletter on 8 June 2018 from:  
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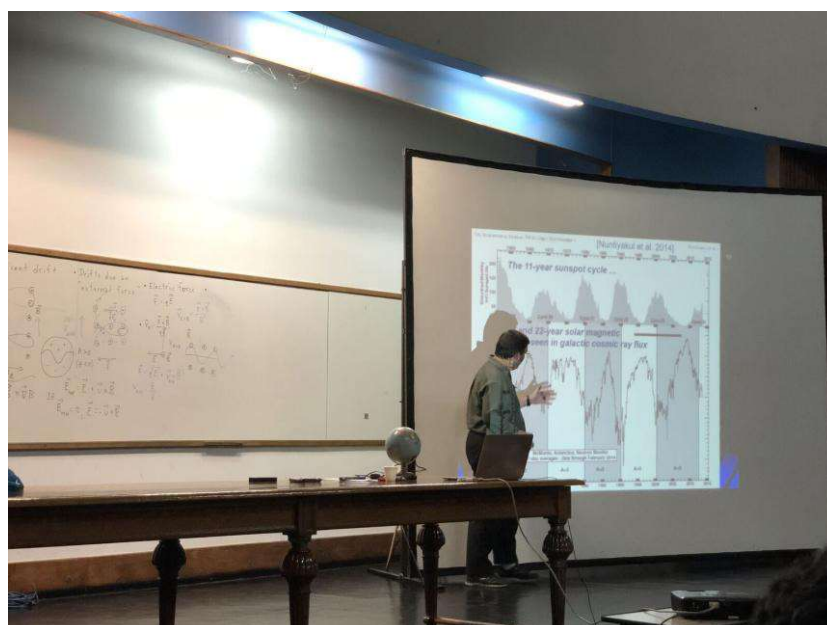
Fraternization of forecasters attending the event.

Students and young scientists had an important role while they attended the Latin American School on Data Analysis and Simulations for Space Physics that took place the week after the XI COLAGE. From 23 to 26 April students had the opportunity to attend lectures given by renowned scientists from different areas of Space Geophysics.

The topics covered by the school and its lecturers were:

- Planetary Magnetospheres, Dr. Frances Bagenal (University of Colorado, USA)
- Particle acceleration and shocks, Dr. David Ruffolo (Mahidol University, Thailand)
- Turbulence in the Solar Wind, Dr. William H. Matthaeus (University of Delaware, USA)
- Space Weather, Dr. Clezio DeNardin (INPE, Brasil)

There were a total of 60 attendees at the school, 23 of them were fully supported and 15 were partially supported.

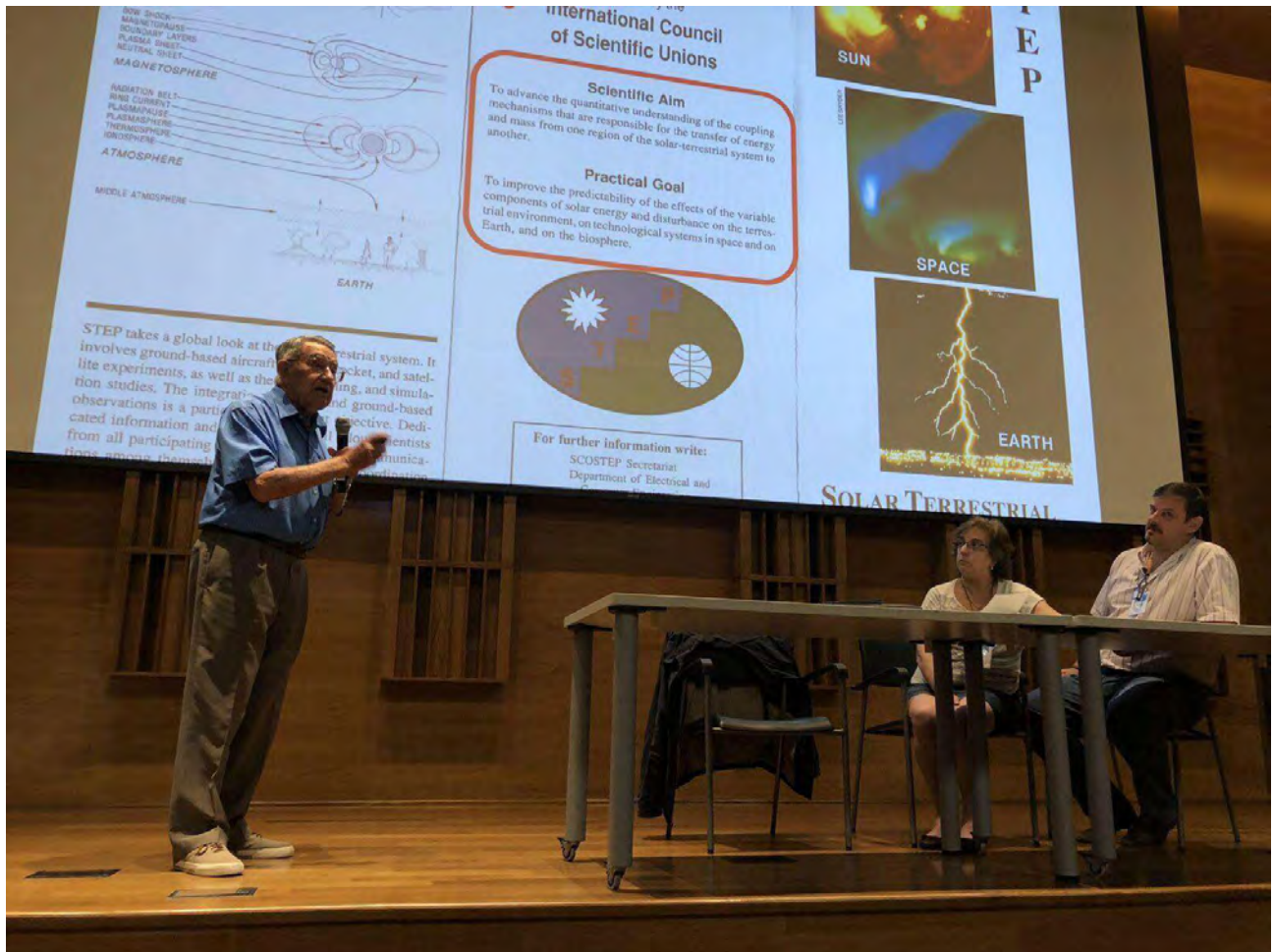




Finally, and for the first time in COLAGE a panel about ‘New Programs in the Sun-Earth system’ took place. The main goal was to engage the scientific community of ALAGE to share its view and its expertise, toward acquiring new knowledge and input for defining future Space Geophysics science research programs. This activity is aligned to the Call for Feedback that a committee formed by SCOSTEP is making with the aim of determining its new scientific program (NSP), following the completion of the current VarSITI program at the end of this year.

This COLAGE panel were organized by Dr. Adriana Gulisano (UBA-IAA), Dr. Ana Elías (UNT-CONICET), Dr. María Graciela Molina (UNT-CONICET) and Dr. Sergio Dasso (UBA-CONICET) on behalf of the Latin American Association of Space Geophysics (ALAGE). Three recognized experts from Latin America in complementary fields were invited to present their vision toward obtaining a roadmap and identifying the highest scientific priorities related to main research areas such as theoretical and numerical studies, ground-based and space data analysis, operational space weather, instrumentation and human resources training among others.

Dr. Juan Roederer (University of Alaska Fairbanks and University of Colorado), Dr. Mandrini, Cristina (IAFE, UBA-CONICET), Dr. De Nardini, Clezio (INPE) shared their view and analyzed several aspects about future in space research in Latin America.



Dr. Roederer pointed out the importance of strengthening basic physics research while Dr. De Nardini emphasized the need to boost human resources training. Dr. Mandrini showed the state of art about international efforts within the scientific community aligned to the aims of the panel. She also stressed out the importance of awareness about space weather for decision of major institutions.

Important questions and discussions took place between the scientific community present at the panel. Some of the exposed ideas can be summarized as the following:

- Cosmic ray stations are an important base for space physics studies.
- Support infrastructure, data storage and communications. New instrumentation deployment focusing in coordinated and extended coverage are needed.
- Enhance technical and scientific staff training using modern pedagogical techniques.
- Train young scientists and impulse early collaboration among them.
- Collaboration within Latin America has to be enhanced through shared efforts in joint research projects and by supporting scientists and students mobility.
- Enhance communication and general outreach to the society, specially at different education levels.

These ideas can be seen as a starting point to outline and to coordinate cross-disciplinary for future science based through international collaboration and to elaborate a recommendation for research funders, in the next coming years.

Finally, we invite all the scientific community to join us in the XII COLAGE to be held in Puerto Varas, Chile in 2020.

Regards

Dr. María Graciela Molina

Dr. Sergio Dasso