

Opening Talk

15th International Congress on Plasma Physics (ICPP 2010) 13th Latin American Workshop on Plasma Physics (LAWPP 2010)

- Dr. Gonzalo Gutierrez, President of the Chilean Nuclear Energy Commission.
- Mr. Fernando López, Executive Director of the Chilean Nuclear Energy Commission.
- Members of the International Advisory Committee of the ICPP.
- Members of the International Advisory Committee of the LAWPP.
- Members of the program committee of the combined conferences.
- Prof. Padma Shukla, Chairman of the International Union of Pure and Applied Physics.
- Dr. Günter Mank, International Atomic Energy Agency
- Authorities from Chilean universities.
- Scientists and students from Chile and abroad
- Ladies and gentlemen

Before five hundred and eighteen years ago, the original people of Latin America have their own civilizations and governments, and social values with respect to nature, solidarity and fraternity.

In 1492, the arrival of European people with external economic interests produced a shock on the cultures and civilizations of America. Then, two hundred years ago, the new people product of the consequent mixture of cultures in Latin America, claimed for the European values of liberty, fraternity and equality, achieving independence from the European domain.

Latin America is a continent of contrasts. In particular, Chile is a land of contrasts. Its territory is a long, thin strip of land between the Pacific Ocean and the Andean mountain range, with a wide variety of vegetation and climates. In the North, deserts dominate – Atacama, one of the most arid in the world, rich in minerals, like copper and lithium. The South is known for its cold pine and lush forests. Chile's central region have a temperate climate, which favors the agriculture.

On behalf of the local organizing committee, we are happy to welcome you.

Last February, our country suffered a great earthquake, one of the strongest history. Although Santiago was little affected, the damage was great in other towns and cities 200 km southern of Santiago. After this event we receive a lot of messages of support from many of you. Thank you very much for your presence here. We appreciate that you decided come from the rest of the world. We highly appreciate your solidarity.

The International Congress on Plasma Physics was first held in Nagoya, in 1980, and is organized every two years since, being the last version in Fukuoka in 2008. The scope of the Congress is to discuss about the recent progress and future view on plasma science, covering a wide range of



aspects including fundamental plasma physics, fusion plasmas, astrophysical plasmas, plasma applications, and so forth.

The Latin American Workshop on Plasma Physics was first held in 1982 in Cambuquira, and the last version was in Caracas. The purpose of this event is to provide a forum for display of the achievements of the Latin American plasma physics community, as well as fostering collaboration between plasma scientists within the region and elsewhere.

In Chile, although there were some efforts during the 60's, sustained research activities in plasma physics began around 1980. I would like to mention two Chilean pioneers in this regard: Prof. Luis Gomberoff from Universidad de Chile and Prof. Hernán Chuaqui from Pontificia Universidad Católica de Chile. At Universidad de Chile the focus was theoretical and space plasma physics whereas in the Universidad Católica the focus was on experimental plasma physics, especially with transient electrical discharges. Other institutions later joined these start-up efforts: Universidad de Concepción, Universidad de Santiago and Comisión Chilena de Energía Nuclear. Nowadays, after 30 years, we can say that Chile has an active plasma physics community, with around 20 researchers and 20 graduate students.

Both International Committees, ICPP and LAWPP, agreed to carry out this combined meeting in Santiago de Chile, considering the celebration of the Bicentennial of Chilean Independence. We acknowledge this as a recognition of the level achieved by the research activities in plasma physics in Chile. We are grateful and proud for this honor.

This meeting is part of the official program of the Chilean Nuclear Energy Commission (CCHEN) within the framework of the Bicentennial activities. This event is also a scientific and academic activity of the project "Center for Research and Applications in Plasma Physics and Pulsed Power, P⁴", of the Comisión Nacional Científica y Tecnológica, CONICYT, Chile, grant ACT-26.

Previous to the ICPP-LAWPP 2010, an important activity associated to the Latin American Workshop on Plasma Physics took place: LAWPP School on Plasma Physics, which was open to worldwide participants with the main objective of providing basic training on plasma physics prior to the Conference. The school had 44 participants from 11 countries. The courses were delivered by lecturers from Brazil, USA and Chile. My special recognition to all of them: Prof. Homero Maciel of Instituto Tecnológico Aeronáutico, Dr. Luis Felipe Delgado Aparicio of Princeton Plasma Physics Laboratory, USA, Dr. Marina Stepanova, Universidad de Santiago, Dr. J. Alejandro Valdivia and Dr. Victor Muñoz of Universidad de Chile, and Dr. Felipe Veloso of Chilean Nuclear Energy Commission.

The program of these conferences was organized by the Program Committee. In particular, Plenary Talks and Invited Topical Talks were selected from a list of nominated presented by the International Advisory Committees of ICPP and LAWPP. Our acknowledgements to the Program Committee, in particular to Prof. Julio Herrera for his valuable work.

The Book of Abstracts contains the abstracts of invited and contributed papers. Full texts of the invited papers will be published as a special issue of *Plasma Physics and Controlled Fusion*. Contributed papers will be published in an issue of Journal of Physics Conference Series, IOP Publishing.

The main focus of the present conferences is basic and applied plasma physics including the fields of atmospheric and space physics, satellite sciences, medicine, environment, industry, mining, energy, among others.

The challenge of nuclear fusion is also presents in these conferences. Nuclear fusion as clean and endless source of energy. Chile has important reserves of lithium in the desert of Atacama. Lithium is crucial in the nuclear fusion fuel cycle. Therefore, the researches related with nuclear fusion are very exciting for us.

We know that the great challenge of nuclear fusion relies on the international collaboration. In the agenda of the meeting that will take place of the International Advisory Committee of the Latin American Workshop in Plasma Physics, is schedule the discussion of the coordination of a Latin American program on nuclear fusion. The collaboration among Latin American research institutions in the framework of a coordinated program of nuclear fusion surely open to advances and developments that would not be possible to obtain separately.

Finally, I would like to give my gratitude to the Chilean Nuclear Energy Commission as host institutions of these conferences.

Welcome to Chile, enjoy the conference and enjoy our country.

Thank you very much.

Leopoldo Soto
Chairman
ICPP-LAWPP-2010

Santiago, August 9th, 2010.