



III International Physics Congress

Universidad de Sonora, Hermosillo, Sonora, México
October 10 - 12, 2007

Editors:

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MARCELINO BARBOZA FLORES
(UNIVERSIDAD DE SONORA)

PREFACE

The III International Physics Congress (III IPC) was held in Hermosillo, México, on October 10 - 12, 2007. The event celebrated the 30th anniversary of our research center for physics: Departamento de Investigación en Física de la Universidad de Sonora. Thirty years ago a small group of young talented scientists proposed the first physics research project which was related to the investigation of radiation effects and defects in solids with strong emphasis on the defect spectroscopy. Today, solid state physics remains as the main area of research with forty full time researchers involved in theoretical and experimental physics fields including optics, statistical and quantum mechanics, astronomy, and mathematical physics. In the last ten years more than 350 scientific articles have been published in very reputable international journals.

Two scientific meetings preceded this Congress. These events were held on November - 1997 and November 2002 for celebrating the 20th and 25th anniversary of our Department. Due to the significant development of the research activities, characterized with increasing levels of scientific productivity and strong international collaboration relationships, we considered appropriate to rise the status from meeting to a Congress type, composed by four symposia: Symposium 1, Metamaterials; Symposium 2, Radiation Effects and Defects in Materials; Symposium 3, Confined Systems, Nanoparticles, Nanostructured and Disordered Materials; Symposium 4, The role of Virtual Observatories in Astronomy. The symposia were scheduled in three simultaneous sessions with the participation of 29 invited lecturers given by internationally renowned researchers and 27 contributed participations. A special Poster Session provided room for additional 60 presentations. A total of 85 participants attended the Congress. The organizing committee considers the Congress a successful event; it exceeded our expectations. It also provided space and time to strength the scientific collaboration between researchers of our Department and colleagues of other institutions including México and from abroad.

We would like to thank the colleagues that eagerly responded to our call to submit full manuscripts for publication on a special issue of the Mexican Journal of Physics - *Revista Mexicana de Física* (RMF). We appreciate their support and patience shown throughout the long Peer-Review revision and feedback process. We express our deepest appreciation to the reviewers for the excellent revision work making possible that all accepted papers satisfied the quality standards established by RMF.

Finally, we thank the authorities of our University, Universidad de Sonora, for their financial support related to travel and accommodation for participants and for bearing the cost of the III IPC proceedings publication. We gratefully acknowledge the enthusiastic commitment of Dr. Pedro Ortega Romero, President of Universidad de Sonora, that made possible to hold the III IPC, and specially for his outstanding and continuous support on promoting and developing scientific research at the Universidad de Sonora, México. We also thank PROMEP - México and CONACyT - México for complementary financial support. The organizing committee is thankful to Sandra Mireya León González, María de la Cruz Corrales Paredes and Martha Lydia Fimbres Chomina for taking care of all the administrative matters.

POSTER OF THE EVENT

III International Physics Congress

Celebrating Thirty Years of Physics Research at Universidad de Sonora
Hermosillo, Sonora, México. October 10 - 12, 2007.

Symposium I: Metamaterials
 Symposium II: Radiation effects and defects in materials
 Symposium III: Confined systems, nanoparticles, nanostructured and disordered materials
 Symposium IV: The role of virtual solar observatories in the solar cycle 24

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INVITED SPEAKERS:

Francisco Jaque - Spain	Ignacio L. Garzón - México
Peter D. Townsend - U. K.	Sergio Ulloa - USA
Richard T. Williams - USA	Eduardo Ludeña - Venezuela
William M. Yen - USA	Alexei A. Maradudin - USA
Akio Hiraki - Japan	R. Barrera - México
José García Solé - Spain	C. T. Chan - China
Matthias Schreck - Germany	J. Sánchez-Dehesa - Spain
Tomás Calderón - Spain	Pierre Deymier - USA
Juan Azorin Nieto - México	L. Mochán - México
H. Murrieta Sánchez - México	P. Halevi - México
J. Christian Schön - Germany	Nykolay Makarov - México
Riccardo Ferrando - Italy	Frank Hill - USA
Roy L. Johnston - U. K.	Alfredo J. Santillán G. - México

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