

The Hispanic Physicist

The Newsletter of the National Society of Hispanic Physicists

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June 2001

NASA's OSS TO WORK WITH NSHP

NASA's Office of Space Science (OSS) held a meeting with professional minority organizations at Western Kentucky University on May 9-10, 2001 to build relationships with these groups and to generate ideas for projects of mutual benefit. NSHP was represented by Mario Diaz and David Ernst.

OSS and NASA's Minority University Education and the Equal Opportunity Programs have the program "Minority University Education and Research Partnership Initiative". Two programs funded in 2000 are at the U. of Texas at El Paso and at the U. of Houston Downtown. Information can be found at spacescience.nasa.gov/education/guide.html.

Charles Magruder (National Society of Black Physicists, NSBP) presented a successful cooperative project. On June 17 NASA will webcast the solar eclipse

from Namibia to 55 science museums. The eclipse will be the draw and other related science will be added. More information can be found at www.museumclipse.org.

OSS is a subunit of NASA composed of four forums: The Solar System Exploration (sseforum.jpl.nasa.gov), Sun-Earth Connection (sunearth.ssl.berkeley.edu), Search for Origins (origins.stsci.edu), and Structures and Evolution of the Universe (cfa-www.harvard.edu/seuform). One can work with OSS itself or through one of the forums. There are also regional offices with brokers/facilitators which can help to start new projects and to match your ideas with NASA goals. The regional offices are Northwest (www.spacescience.org), South and Lower Midwest (www.lpi.usra.edu/lpi.html), Upper Midwest (analyzer.depaul.edu/NASAbroker), Southeast (serch.cofc.edu/serch) and Northeast (www.ossbroker.net).

In the meeting NSHP also continued its dialogue with NSBP to hold a joint meeting. Necessary ingredients for such a meeting are funds for student and speaker travel. If you have ties to an industry or foundation which you believe could provide such support, please let an NSHP officer know. This is a good opportunity to begin building industrial ties.

NASA has a very pro-active outreach program. Perhaps more important than their ability to finance projects is their network of people with expertise and a willingness to work cooperatively with an organization such as NSHP. If you have an idea for a specific NASA/NSHP project please let an NSHP officer know.



JLAB's to organize a Pan-American Advanced Studies Institute

A group at Thomas Jefferson National Laboratory (JLab) has started a discussion on proposing a Pan American Advanced Studies Institute (PASI) on the topic of "**Quarks in the Confinement Region**". The institute will include Jefferson Lab physics, fixed target physics from Fermilab, and RHIC physics. The project started on this last spring and has until the spring of 2002 to submit a proposal.

The PASI Program are short courses two to four weeks duration, supported by the Department of Energy and the National Science Foundation, involving international lecturers at the advanced graduate and postgraduate level for the dissemination of advanced scientific knowledge and to stimulate cooperation among researchers of the Americas in the physical sciences.

If you are interested subscribe to the group mailing list named "hispanic" by following the instructions at: http://cc.jlab.org/services/email/How_to_Subscribe.html. The archives themselves can be found at http://www.jlab.org/cc/mail_archives/GENERAL/. For more information contact NSHP Secretary, Dr. David Ernst (david.ernst@vanderbilt.edu).



Research Profile: Carlos Ordoñez

Carlos A. Ordonez's jump to fame started when he tested his design for "cryogenic heat engine" in an old Volkswagen 'Beetle' frame in Denton, Texas. After earning a Ph.D. from U. Texas at Austin, Carlos spent two years at UT El Paso where, due to the hot weather, he started his love affair with cold substances, such as liquid nitrogen. Now as an Associate Professor at the Department of Physics in the University of North Texas, Carlos has learned how to live with the constant TV and newspaper interviews, and is currently doing research in:

- Penning Trap Related Research Including Antimatter Studies
- Plasma Space-Charge Research Including Plasma Sheath Related Studies, and of course . . .
- Cryogenic Heat Engine Research

Carlos is a member of the Executive Committee of the Texas Section of the American Physical Society. For a photo of his "Cool Car" see <http://www.mtsc.unt.edu/CoolLN2Car.html>.



News you can use

Southwest Texas State University



DOCTORAL POSTDOCTORAL VISITING SCIENTIST RESEARCH ASSOCIATE Southwest Texas State Univ.

SWT has an immediate opportunity for a physics, materials science or inorganic physical chemistry research associate (a doctoral student, post-doctoral scientist or visiting faculty) interested in microelectronic, magnetic and magnetic photonic thin film materials research. Funds are available for a year-long appointment, with an opportunity for an additional year.

The researcher would work in a research group headed by Professor Carlos Gutierrez (cg08@swt.edu) from the Physics Department (www.physics.swt.edu), and will be directly involved in advanced reactive ion beam sputter fabrication of thin films, advanced x-ray diffraction analysis (using a new Bede D1 diffractometer), x-ray fluorescence, magnetometry, optical reflectivity, scanning electron microscopy with energy dispersive microscopy analysis and electrical characterization.

SWT is located in the attractive town of San Marcos, TX (www.ci.san-marcos.tx.us) and is uniquely positioned just 29 miles south of downtown "Silicon Hills" Austin,

(www.ci.austin.tx.us or www.austin360.com).

This location will facilitate collaborative interactions with major microelectronics related collaborators at Advanced Micro Devices, Applied Materials, Lucent Technologies, Motorola and SEMATECH). In addition, the research will involve collaborations with groups at the University of Arkansas and Michigan Technological University. SWT's Materials Physics B.S./M.S. degree programs have been recognized by the American Physical Society and the American Institute of Physics as a model curriculum program responsive to interactions with the microelectronics industry (for example: see the April 2001 *PhysicsToday*).

The visiting researcher will be involved in the following projects:

- **Alternative Gate Oxide Materials Project**
- **Athermal Annealing of Ion Implanted Silicon and Dielectric Films**
- **Photonic Magnetic Crystals Project, and**
- **Magnetoelectronic Film Materials Project**

Internship in Noise Monitoring

Interns are needed at the Mojave National Preserve to study the impacts from aircraft overflights. "Natural quiet" is a resource of concern for the park as aircraft noise impacts wilderness values and wildlife. A new airport is proposed just 17 miles from the park boundary. Sound monitors need to be installed to determine existing conditions. The ECO Associate will learn about sound monitoring equipment, data storage, and how to interpret the data.

Meteorology, physics, or geology degree, or computer science. Knowledge of acoustics and wave theory, experience using topographic maps and GPS and ability to work in remote locations alone.

Duration: 14-16 weeks, possible extension up to 22 weeks **Stipend:** \$12.03 per hour.

Send resume and references to Meagan Cocks, Internship Program Coordinator, The Environmental Careers Organization, 1218 Third Avenue #1515, Seattle, WA 98101 Phone: (206) 625-1750 Fax: (206) 625-9246, <http://www.eco.org>, meaganc@eco.org

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