INTERACTION

Point

SCAL

January 17, 2003

Science at SLAC: 2003 Will Bring Progress in Many Areas

By Tom Mead

There’s a lot of science going on at SLAC, and 2003 promises to be a year of progress on many fronts, despite the budget challenges we face. We sat down with Penis Drell, Research Director at the Lab, to discuss some of what’s in store for the year ahead.

Drell expects to see significant progress in 2003, as the collective energies of scientists worldwide become more focused on this initiative. “I hope that this year we will see more universities engaging in essential ILC research and development, and becoming part of the collective international political and scientific will to build this facility.”

While Drell does not anticipate that a decision will be made this year on where the LC might be located, he believes we will see technical progress on SLAC’s designs for a linear collider.

Focus on Education

A big part of what SLAC is, according to Drell, and what it offers to the world, is always going to be the young scientists. “The brightness of our world-class research can sometimes overshadow the fact that SLAC is an educational institution, that our people are our greatest resource, and that the scientists we help train are among our highest accomplishments.”

“The graduate students and post-docs in all areas who get trained here and then go out to advance science around the world are very high on the list of contributions of which we are most proud.”

(See 2003 OUTLOOK, page 2)

BABar Collaboration Meeting Draws Global Audience

By Shanna Williams

When approximately 340 BABar collaborators from nine countries descended on SLAC for a week in December, they weren’t just after your parking space. They came to discuss the state of the BABar detector — what they’ve learned from it so far and what’s next.

“We had a very exciting collaboration meeting from December 9 through 14,” said Marcello Giorgi, the BABar spokesperson. Bringing together researchers from 74 institutions in Canada, China, France, Germany, Italy, Norway, Russia, the UK and the United States, the meeting included plenary sessions on analysis, computing and the detector, with parallel sessions on more specialized topics.

A discussion of experimental results was a primary focus of the meeting. Groups working on similar analyses collaborate to produce journal papers and conference presentations. The meeting provided a forum to discuss analysis results prior to public release. Then there is the detector itself — the maintenance and upgrade work recently done on it, performance after the work and the ‘lessons learned’ for future maintenance and upgrade shutdowns. Finally, the researchers discussed how to ensure they have the needed computing power to utilize data from the BABar experiment.

“There was a committee formed to review how we do our computing,” said Barbara Barrera, the BABar administrator. “They came up with recommendations for a revised model.” Another committee reported on improving the muon detector system.

Guest House to Open July

Reservations Being Accepted

By Shanna Williams

Starting in July, the SLAC Guest House will be open for business. The lodging is meant for users, conference attendees, and other guests. However, if space allows, staff can also stay there for about $80/night.

In April 2002, construction began on the three-story, 112-room Guest House, which is located between SLAC’s main entrance and the Central Lab area on the left side of the loop road. Planners anticipate that not only will the Guest House serve as convenient lodging for people affiliated with SLAC, but also that its spacious lobby will provide a relaxed place for employees to meet with colleagues after work.

The 175-square foot rooms will include a double bed, internet connection, cable TV, dresser, armoire, desk and chair. There are a number of room configurations with slightly different nightly rates. For a small fee, miniature refrigerators and microwaves are available. The Guest House will include an exercise room, laundry facilities, and a 24-hour shop with gifts, snacks, and microwaveable food.

Enrique Jevons of Stanford University Student Housing Services is the assigned manager. Jevons said, “We are now accepting reservations for stays beginning July 1. We have already booked reservations, including several upcoming conferences.”

For SLAC Guest House information, rates and reservations, contact the manager via telephone at 650-926-2800, or visit the Guest House Web site at http://www.stanford.edu/dept/bhs/SLAC/index.html.

Chinese New Year Banquet

Come celebrate Chinese New Year

Time and location TBD (tentative) Feb. 3, 12-2 p.m. cost $11

Members of the SLAC community are welcome, please contact Carol Tom (carol.tom@slac.stanford.edu, ext. 4273) to reserve your spot.

The SLAC Guest House is currently under construction. Inset photos show interior views of a sample guest room.

The BABar management team: (top row, from left) Lizio Lancori, Physics Analysis Coordinator; Marcello Giorgi, Spokesperson; Bill Wcislo, Technical Coordinator. (Bottom row, from left) AJ Stewart Smith, Senior Adviser; Barbara Barrera, Administrator; Stephen Gody, Computing Coordinator.
At the start of this New Year I would like to send my best wishes to you and your families. There is not enough space in this column to pass on my greetings in all the languages of SLAC’s international community, so here is the English version – Happy New Year!

We have had excellent news to start the year. Professor Roger Blandford, currently at Caltech, and Professor Steve Kahn, currently at Columbia University, have both agreed to join SLAC and the Stanford Physics Department as Director and Deputy Director of the new particle astrophysics and cosmology Institute. The focal point of the Institute will be a 25,000 square-foot building on The Green between the ROB building and the Panofsky Grove. The new building, which will have workspace for 90 people, laboratory space and a 150 person fixed-seat auditorium, will be completed in 2005.

Both Blandford, a theorist, and Kahn, an experimentalist, are internationally recognized as outstanding leaders in the fields of particle astrophysics and cosmology and are the ‘dream team’ to launch the new Institute. Their scientific accomplishments and demonstrated leadership ensure an exciting and highly productive future for the Institute. They will take up their new positions in September 2003. The Institute is off to a fantastic start!

I am sure you will all join me in sending both Roger and Steve a very warm welcome to SLAC and Stanford.

This year should provide a wealth of scientific results, due to the hard work of the SLAC Community. “I am painting a picture of a scientific program that will deliver a rich series of measurements and new scientific results through a variety of experiments. Despite constraints and cutbacks, the SLAC science program is robust and healthy. 2003 will see energetic and evolutionary science getting done here. I’m looking forward to it.”

2003 Outlook
(continued from page 1)

Current Programs
Among programs currently underway, Drell notes that initiatives such as GLAST, the advanced accelerator work, and the smaller ‘desktop’ experiments such as the neutrino mass R&D work will continue to make progress. GLAST, a gamma ray telescope that will be launched into orbit in 2006, is making excellent technical progress. This year will be a very important construction year for them.

“There are some fine-advanced accelerator R&D experiments probing the new technologies that may power the next generation of accelerators,” said Drell. “Two experiments in this requisite series— laser acceleration and plasma-wakefield acceleration—are exploring strategies for achieving extraordinary particle acceleration gradients.”

Among the ‘desktop’ experiments, Drell notes that SLAC scientists working on the Enriched Xenon Observatory experiment believe that if their research is successful they will have a new method for measuring the Majorana mass of the neutrino down to 10 milli-electron volts. “R&D will make headway in 2003 despite budgetary constraints that have forced me to slow the effort and, therefore, the progress.”

Pulling Together
Certainly this year’s budget issues will have an impact on the work done at the Lab, and this has led to some tough decisions. “In these days of tight fiscal restraints I have had to make difficult choices about the research program under my stewardship,” she said. “I have had to slow some detector R&D projects. In addition, the three approved experiments (E159, E160, E166) that were to rely on a new photon beam line have been stopped altogether. They are lovely physics, but they are not our highest priority physics.”

This year should provide a wealth of scientific results, due to the hard work of the SLAC Community. “I am painting a picture of a scientific program that will deliver a rich series of measurements and new scientific results through a variety of experiments. Despite constraints and cutbacks, the SLAC science program is robust and healthy. 2003 will see energetic and evolutionary science getting done here. I’m looking forward to it.”

Purchasing Welcomes New Contract Administrator
The Purchasing Department is pleased to introduce their newest Senior Contract Administrator, Bruce Patten. He will be working in the Construction Contracting Group.

Patten has 12 years of experience working on facilities contracts in support of construction and maintenance efforts for Loral Space and Communications, Inc. in Palo Alto. His prior experience was as a Purchasing Agent for the Bechtel Corporation, as well as work on major seismic, clean room facilities and nuclear power plant projects for Bechtel and NASA.

Patten holds a B.A. from the UC Berkeley and an MBA from the University of Delaware. Purchasing feels Patten will be a valuable asset to their Department, bringing new perspectives and innovative ideas to the area of construction procurement.

Please join us in welcoming him to SLAC.
SSRL Helps Solve Vasa Mystery

By Slhawna WillViamls

SSRL is helping provide clues to save the 400-year-old Swedish ship Vasa, preserved for centuries in Stockholm Harbor but now in danger of succumbing to air in the museum that houses it.

"The SSRL facilities were actually the key to solving the problem," said Magnus Sandstrom, a chemist from Stockholm University who came here to find what is causing the ship's decay.

The massive Vasa warship, launched in 1628 in Stockholm Harbor, tipped over and sank soon after its launch. It was brought back up in 1961, and put in a specially built museum. Conditions in the harbor kept the ship well preserved while it was underwater, but a few years ago, after an exceptionally humid summer, a museum conservator noted discoloration on parts of the ship, a warning that decomposition was starting.

The story of the Vasa has drawn attention worldwide. When Sandstrom and a Vasa Museum curator, Lovisa Dal, came to SLAC in mid-December to make new measurements, the Scientific Arts Media department was asked to shoot some footage of the pair in action for a Swedish science television show.

This filming was "the second or third project we've done like this," said Chip Dalby (TIS), a member of the film crew. The crew went about an hour of footage to Sweden, showing Sandstrom and Dal preparing and analyzing a sample, and talking about the process in Swedish.

To get samples from the ship for analysis, museum curators used a machine like those used to get core samples from living trees. They stored the samples in tubes filled with nitrogen, since exposure to oxygen could change the wood and make later measurements unreliable.

Before the wood samples could be analyzed, they first had to be filed into a fine powder and sandwiched between mylar tape and polypropylene film on an aluminum slide. Dal did this in a nitrogen-filled box. The slide was then put in a helium-filled X-ray sample chamber, where high-energy synchrotron radiation hit the sample and generated a spectrum. A computer analyzed the spectrum to find what elements were in the sample and in what chemical state they occurred at different depths from the surface of the wood.

So what's eating the Vasa? Sulfuric acid is the villain here, researchers found. Sandstrom hopes that with more analysis, they can identify what is hastening the acid formation, and find better ways to combat it.

Recycling Benefits Those in Need

By Linda DuShine White

In February 2002 SLAC joined the Make An Impact program, partnering with American Transitech, Inc., a company specializing in the remanufacture of toner cartridges.

In ten short months SLAC was able to glean $350 for San Jose's Second Harvest Food Bank by the simple act of recycling toner cartridges.

In addition to feeding the hungry and helping the environment, SLAC saved a hefty $5,000 last year from the hazardous waste disposal costs caused by tower cartridges.

"We're now looking for ways to enhance our recycling program in 2003 so we can contribute even more to the Second Harvest Food Bank," said Janet Adams, SLAC's Deputy Purchasing Officer.

Fax machine, printer and copier cartridges can all be recycled. To make a difference, join the 19 departments already participating in Make An Impact by sending an e-mail request to Jean Hubbard, Business Services Manager for Purchasing (jehubbard@slac.stanford.edu). No phone calls, please.

For information on Second Harvest Food Bank, see: http://wwwww.secondharvest.org/dl/aboutus/index.html

Also see the recent TIP article: http://www2.slac.stanford.edu/tip/2003/dec06/recycle.htm

Happy New Year!

Interaction Point January 17, 2003
Upcoming Events

**Tuesday, Jan. 24 12:30 p.m.**
SLAC, Orange Room
SLAC EXPERIMENTAL SEMINAR
Eugeny Sokolski, Novosibirsk
“Ee-Physics at Fcm < 2 GeV at Novosibirsk”

**Monday, Jan. 25, 4:15 p.m.**
(Refusments-3:45)
SLAC, Parnicky Auditorium
SLAC DEPARTMENTAL COLLOQUIUM
Peter Bender, LL of Colorado
“Massive Black Holes and the LISA
Gravitational Wave Mission”

**Monday, Jan. 25 7:00 p.m.**
Stanford, SEQ 201
STANFORD SPECIAL PHYSICS SEMINAR
Alan Guth, MIT
“Cosmic Inflation and the
Accelerating Universe”

**Tuesday, Jan. 26 4:00 p.m.**
Stanford, SEQ 201
STANFORD APPLIED PHYSICS/ PHYSICS DEPT COLLOQUIUM
Alan Guth, MIT
“Time Travel and Cosmic Strings: A Playground for Theoretical Physicists”

**Tuesday, Jan. 28 Noon**
SLAC, Parnicky Auditorium
SLAC WOMEN’S INTERCHANGE SEMINAR
Gerta Endermann, Scientist/ Nutrition Consultant
“Good Fat-Bad Fat: Managing Heart Disease, Blood Sugar and Weight with Healthy Fat in your Diet”
Please send additions to: seminars@slac.stanford.edu
For complete event listings, see:
http://www2.slac.stanford.edu/tpo/sem.html

**Tuesday, Jan. 28 10:00 a.m.**
SLAC, Orange Room
SLAC EXPERIMENTAL SEMINAR
Evgeny Sokolski, Novosibirsk
“e-ee Physics at Fcm < 2 GeV at Novosibirsk”

**Monday, Jan. 27, 4:15 p.m.**
(Refusments-3:45)
SLAC, Parnicky Auditorium
SLAC DEPARTMENTAL COLLOQUIUM
Peter Bender, LL of Colorado
“Massive Black Holes and the LISA
Gravitational Wave Mission”

**Monday, Jan. 27 7:00 p.m.**
Stanford, SEQ 201
STANFORD SPECIAL PHYSICS SEMINAR
Alan Guth, MIT
“Cosmic Inflation and the
Accelerating Universe”

When is Your Blanket Order Expiring? Purchasing Will Notify You

The Purchasing Department wants to assist you by making you aware when blanket purchase orders (PO) are due to expire.

Starting January 23, e-mail notification will be sent 90, 60 and 30 days prior to the expiration date of blanket orders. This notification will be sent to the person contact designated on the requisition and the buyer who generated the PO. The 30-day notification will be the last e-mail you will receive.

Depending on the dollar value of the blanket order, a new requisition or a supplemental requisition may need to be submitted when you get the 90-day notification by e-mail.

By responding to these notifications in a timely manner, you will:
1. continue to get the product or service you need without interruption;
2. provide purchasing with the time they need to comply with your requirements, and;
3. help us to pay our vendors in a timely manner.

The Purchasing Department is constantly striving to make SLAC an efficient, yet cooperative environment in which to work. With your help we will make it happen.

Contact: Tom Murphy, Purchasing Office, ext. 3902, smurphy@slac.stanford.edu

Enhanced Security Measures at Shipping and Receiving

Recently you may have noticed that the bay doors and the side access door to the Shipping and Receiving department have been shut.

The bay doors will only be open when a delivery truck is being off-loaded. Individual access to the Shipping and Receiving dock area will also be limited. These measures are necessary to assure that the shipments are protected from theft and loss prior to their delivery to facility staff. This is part of SLAC’s continuing Integrated Safeguards and Security Management (ISSM) program.

To check on the delivery status of an item ordered under a purchase order, first check Business Information System (BIS) at https://www-bis-slac.stanford.edu/slaslonly/bis/orderingstatus.asp. After checking BIS, if there are any questions, please contact Shipping and Receiving for assistance.

In the unlikely event that the wrong item is delivered or picked up at the dock, please return the item to Shipping and Receiving for resolution.

Contact: Sandra Pickrom, Shipping and Receiving, ext. 4247, sandruca@slac.stanford.edu

A Message from the Payroll Department

Have you moved lately? Does the Human Resources Department have your correct mailing address?

W-2 forms will be mailed at the end of January to the address indicated on your personnel record. If you have had a recent change of address, please notify the Payroll Department, Ext. 4577, carol@slac.stanford.edu

The Interaction Point

**On-Line Edition**
http://www2.slac.stanford.edu/tip/