Working Group Explores Anti-Terror Initiatives

In the wake of the devastating September 11 terrorist attacks in New York, Washington, D.C., and Pennsylvania, BNL has established an anti-terrorism working group to identify innovative approaches that may help to preserve the safety and enhance the long-term security of the United States and its people.

The 31-member BNL working group builds on an urban anti-terrorism technical support organization established at the Lab in March 2001. The group is headed by Ralph James, Associate Laboratory Director for Energy, Environment & National Security; with support from Joe Indusi, Chair of the Nonproliferation & National Security Department, and Paul Moskowitz, Program Manager for Counter-Terrorism Initiatives. The working group aims to consolidate BNL’s unique capabilities and expertise in anti-terrorism to help prevent and respond to terrorism.

“[The destructive and vicious attacks of September 11 created an enormous challenge to build an improved security framework for our nation],” said James. “As vanguards for the advancement of technological solutions, scientists at Brookhaven and elsewhere are now mobilizing to answer that challenge.”

The working group represents most of BNL’s scientific disciplines. Many of the group’s ideas emphasize improved means to prevent and protect against attacks and to provide emergency response if prevention and protection should fail. Approaches and technologies currently being explored include:

- Sensors for the early detection of nuclear, chemical, and biological agents and explosives, with the ability to detect trace quantities of these materials.
- A one-of-a-kind chemical sensor to locate and identify chemical spills or ground contamination from a safe distance. Another technique under development uses microwaves to image unknown materials.
- Methods to detoxify nerve gas agents using an enzyme that can degrade such compounds. This work could lead to topical lotions that protect the skin.
- Structural studies of viruses to determine how these organisms attach to human body cells. BNL’s work may help scientists design vaccines and antibiotics against biological weapons and aid in identifying these agents. Similar structural studies of chemical agents may also help design countermeasures for chemical weapons.
- A jackhammer-like device that could be used to break up concrete and other debris in enclosed spaces.
- A mapping imaging tool to map iron structures hidden in debris to aid in search-and-rescue missions.

(continued on page 2)
**Calendar of Laboratory Events**

- The BER A Sale Office is located in Becker Hall and is open weekdays from 9 a.m. to 1 p.m. For more information, contact Andrews, Ext. 7477.
- Additional information for Hospitality Guests can be found on the Lobyette board and the bulletin board in the apartment area.
- Contact names are provided for most events.
- Calendar events flagged with an asterisk (*) have an accompanying description.

**Today is the Deadline for Health Care, Dependent Day Care Reimbursement Accounts**

Enroll now in these accounts. Forms are available in the Benefits Office, call Benefits Office, Ext. 2177.

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**BNL Wins Two R&D 100 Awards**

At the award ceremony in Chicago, with Interim BNL Director Peter Paul (right), are BNL's 2001 R&D 100 winners: (from left) Ralph James, Eugenie Premuzic, and M. Kay Dellimore.

On October 4, at Chicago's Museum of Science & Industry, BNL's Ralph James, Eugenie Premuzic, and Eugenie Premuzic were presented with 2001 R&D 100 awards by Research Magazine. The awards honor the 100 outstanding processes chosen by the magazine as the top technological achievements of the year.

James, who joined BNL in June of 1999 as Associate Director for Energy, Environment & National Security, won the award for work he done while he was at Sandia National Laboratory. With collaborators from BNL and Israel's Technion, he invented a technique that allows the growth of large single crystals of cadmium-zinc telluride with desired electrical properties. Radiation detectors produced from these crystals operate effectively at room temperature, require little maintenance, and provide the capability of identifying radioactive sources in the environment. James' research will be useful in safeguarding nuclear materials, imaging gamma-ray bursts at the edge of the universe, and environmental cleanup, and improving the detection of tumors and heart disease.

James is a three-time winner of the R&D 100 Award, having won previously in 1998 and 2000.

Mow Lin of the Energy Sciences & Technology Department, retired BNL scientist Eugenie Premuzic, and Caithness operations, also won their R&D 100 award for inventing a new silicon-recovery technique in this new environment. In The Editor of August 3, 2001, (go to rweb bnl.gov/rweb/publ/ bulletins.html), the process lowers production costs in harnessing geothermal power and could lead to new industries in states rich in geothermal resources.

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**Anti-Terror Initiatives**

- materials studies that lead to "smart" buildings that are more resistant to terrorist acts involving explosives and chemical biological agents.
- an improved way to estimate security risks at office buildings, energy supply/distribution systems, airports, and other infrastructural elements, incorporating weighted analysis of threats, vulnerabilities, and consequences.
- techniques to model and track aerosols and chemicals as they move through air, and identify and assess sources and trajectories of these airborne contaminants.
- training and role-playing exercises to help first responders prepare for potential terrorist attacks.

"Our scientists are determined to apply their skills to re-duce the likelihood that the pain we experienced on September 11 is ever felt again," said James. "The terrorist attacks altered the way many scientists conduct business, and it is unlikely we’ll be back to 'business as usual' anytime soon."

- Peter Genzer with Patrice Pages

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**Anti-Terror Initiatives (cont’d)**

**2001 R&D 100 Awards**

- Wayne Beltis — Physics, BNL
- Andrew Davis — C-A, BNL
- Maguina Hada — Biology, BNL
- Pierre-Marie Paul — Chemistry, BNL
- Ronald Picard — NBL
- John Sheehan — Env. Rest., BNL
- Huang Lu — Chemistry, BNL
- John Whitehurst — Reactor

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**WEEK OF 12/05**

**Monday, 12/3**

- Noon Recital

- The Stony Brook Bach Ensemble will present a noon recital of musical works by J.S. Bach.

- **Wednesday, 12/5**

- Winter Concert at Berkner Hall. BNL Deputy Director Cheryl Williams will deliver the keynote address. The concert will feature the BNL Gospel Choir; the Stony Brook Baroque Ensemble; and the BNL Gospel Choir and the BNL Gospel Choir and the BNL Gospel Choir will present a special holiday concert. For more information, contact Andrea Dehler, Ext. 3347; or andrea.dehler@bnl.gov.

- **Friday, 12/7**

- BNL Deputy Director Cheryl Williams will deliver the keynote address. The concert will feature the BNL Gospel Choir; the Stony Brook Baroque Ensemble; and the BNL Gospel Choir and the BNL Gospel Choir will present a special holiday concert. For more information, contact Andrea Dehler, Ext. 3347; or andrea.dehler@bnl.gov.

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**New渝 2002**

- **Monday, 12/9**

- **Tuesday, 12/10**

- **Wednesday, 12/11**

- **Thursday, 12/12**

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**Meet Melissa Bittrollo, HR Benefits Office Representative**

Melissa Bittrollo, who has more than six years experience in medical insurance, arrived at BNL on Monday, October 22, to take a Human Resources (HR) representative position in the Lab's Benefits Office. Bittrollo succeeds SHR Representative Nancy Concordo, who left BNL after two years of service.

According to Benefits Office Manager Denise DiMeglio, “Melissa’s primary responsibility is to assist employees and retirees with their questions, concerns, and claims relating to their medical and dental benefits.”

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**Arrivals & Departures**

**Arrivals**

- Wayne Beltis — Physics, BNL
- Andrew Davis — C-A, BNL
- Maguina Hada — Biology, BNL
- Pierre-Marie Paul — Chemistry, BNL
- Ronald Picard — NBL
- John Sheehan — Env. Rest., BNL
- Huang Lu — Chemistry, BNL
- John Whitehurst — Reactor

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**Coming Up, 12/12 Noon Recital**

The Stony Brook Baroque Players will perform lyrical and virtuosic baroque music at Berkner Hall.

**Brookhaven Lecture**

On Wednesday, December 12, 4 p.m. in Berkner Hall, Stephen Peggs of the Collider-Accelerator Department will give the 56th Brookhaven Lecture, on “Protons for Accelerators Can Cancer Therapy and Imaging.”

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**Money Talks Seminar: Plan Retirement, Estate Planning**

To be able to take advantage of the opportunities available after retirement, one needs to plan carefully. Financial Advisors Inc. will present a Money Talks Seminar on “Pre-Retirement and Estate Planning” on Wednesday, December 5, 5:30-7:30 p.m. in Berkner Hall. Topics will include calculating the cost of retirement, identifying sources of retirement income, determining how much you need to save, and much more.

For more information, contact Joyce Wund, Ext. 7516 or pwund@bnl.gov.
Beginning Dance Lessons Start 12/5

The 2001 Toy Drive has begun and will run through Thursdays, Dec. 6 and 13. The annual drive helps bring happiness to young people in local communities. Donations to the Toy Drive is open to all ages at the BERA Sale Office in Berkner Center, weekdays, from 9 a.m. to 3 p.m.

For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

UNITED WAY DONATIONS

BRL employees have raised $58,236 since the BRL's 2002 United Way campaign kicked off on November 7. The theme of this year's campaign is “Shining From the Heart,” and the goal is to raise $115,000 in donations. “The staff is very enthusiastic about raising more money for the United Way this year,” said Chris Ronick, this year's United Way campaign chair. “The LRL's initial response was strong and committee members voiced their support that will continue.”

Beth Blevins, co-chair of this year's campaign, heads the volunteer for a holiday party must contact Christine Ronick, Ext. 630, or blevins@bnl.gov.

Kay Dellimore, Ext. 2873 or holiday party must contact M. Kay Dellimore@BNL.GOV.

For more information about volunteer efforts, contact Blevins, Ext. 630 or blevins@bnl.gov.

An additional way in which to participate is through the holiday party division of the Timothy Hill Children's Ranch. This 104-acre working ranch, located in Smithtown, is home for local troubled teens.

The following dates are open for holiday parties:
- Dec. 2-4: Smithtown public schools. Ted, Ext. 4284 or 878-6898.

For more information or a registration form, contact Marcia Schwartz, Ext. 6594, or Schwartz@bnl.gov or Ext. 6503; or Sue Pertino, pertino@bnl.gov or Ext. 2483.

Poinsettia Sale

BRL will be selling poinset- tias this year to benefit Jack's Foundation, the division of the Timothy Hill Children's Ranch. This 104-acre working ranch, located in Smithtown, is home for local troubled teens.

The following dates are open for the sale:

For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Contact Christine Ronick, Ext. 630, or blevins@bnl.gov.

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LABORATORY RECRUITMENT – Opportunities for Laboratory employees.

TB245H. SECRETARY (CW-2) – Requires a background in secretarial skills and computer proficiency. Must be able to work independently, prioritize tasks, and be capable of handling non-routine matters. Preference for proficiency in Microsoft Word, Excel, PowerPoint, Access, and Outlook. Must be knowledge of basic office practices and procedures; and knowledge of Laboratory policies and procedures highly desirable. Must have the ability to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software. Must be able to work independently, prioritize tasks, and be capable of handling non-routine matters. Preference for proficiency in Microsoft Word, Excel, PowerPoint, Access, and Outlook. Must be knowledge of basic office practices and procedures; and knowledge of Laboratory policies and procedures highly desirable. Must have the ability to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

TB252R. SR. ADMINISTRATIVE SERVICES ASSISTANT (A-3, reposting) – Requires an AAS in business or related field, proficiency in MS Office applications (Word, Excel, PowerPoint, Access), and at least five years' experience in an office setting. Responsibilities include handling access-controlled documents, preparing correspondence, scheduling appointments, managing confidential information, and coordinating routine office support. Must be able to work independently, prioritize tasks, and be capable of handling non-routine matters. Preference for proficiency in Microsoft Word, Excel, PowerPoint, Access, and Outlook. Must be knowledge of basic office practices and procedures; and knowledge of Laboratory policies and procedures highly desirable. Must have the ability to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

TB295S. MK2255. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in experimental particle physics with knowledge of C++ highly desirable. Will join the Omega Group working on the D0 experiment and be expected to contribute to software development, analysis of the data and the running of the experiment. Must have the ability to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

TB309A. ADMINISTRATIVE SERVICES ASSISTANT (A-2, reposting) – Requires an AAS in business or related field, proficiency in MS Office applications (Word, Excel, PowerPoint, Access), and at least five years' experience in an office setting. Responsibilities include handling access-controlled documents, preparing correspondence, scheduling appointments, managing confidential information, and coordinating routine office support. Must be able to work independently, prioritize tasks, and be capable of handling non-routine matters. Preference for proficiency in Microsoft Word, Excel, PowerPoint, Access, and Outlook. Must be knowledge of basic office practices and procedures; and knowledge of Laboratory policies and procedures highly desirable. Must have the ability to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

TB360. HR PROJECT ENGINEER (P-9) – Requires an MSEE with a specialty in the area of digital electronics. Experience in digital electronics and computer engineering, an understanding of types of control components, design and development efforts associated with this experiment, and expectations in a research environment are desired. Must be able to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

TB366. STAFF ENGINEER (P-5, reposting) – Requires an MS with a specialty in mechanical engineering, an understanding of types of control components, design and development efforts associated with this experiment, and expectations in a research environment are desired. Must be able to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.

PROFESSIONAL ACTIVITIES ASSOCIATE (P-5) – Requires an MSEE with a specialty in the area of digital electronics. Experience in digital electronics and computer engineering, an understanding of types of control components, design and development efforts associated with this experiment, and expectations in a research environment are desired. Must be able to establish rapport with diverse groups and individuals. Must be proficient in the use of word processing equipment and computer software.