

## New TID Head Is Diane Mirvis

The new head of the Technical Information Division (TID) is Diane Mirvis.

To join the Lab on November 28, Mirvis had left the Syracuse Post-



Diane Mirvis

Standard and Herald-Journal, morning and evening newspapers published by the Newhouse Corporation, for which she functioned as the Information Services Manager for five years.

In announcing Mirvis' appointment, Deputy Director Martin Blume stated, "We particularly welcome her expertise in computerized information systems and look forward to her applying her experience to BNL's library system. The Laboratory's library users — which means practically the entire staff — are lucky to have her in charge."

In her previous position, not only was Mirvis responsible for the newspapers' traditional paper-based library, but also for its on-line information system, which the newspaper staff could access from their desktop computers. As part of her job, she purchased the papers' hardware and software, contracted with data-base ven-

dors and organized computer training.

Knowing the advantages of an automated library, Mirvis would like to see BNL scientists have similar access to information in the Lab's Research Library. As Mirvis explains, "Today's library shouldn't be a distant repository of archival material, but a dynamic source of up-to-date information that can be readily retrieved by computer."

In making the transition, Mirvis will be working with the TID staff and the Computing & Communications Division in developing and implementing plans for automation of the Research Library, which has been considered for several years.

"I would also like to see the information services provided by the librarians expanded, as well as their roles — so that they can be rightfully called part of the Lab's research team," Mirvis adds.

After obtaining an undergraduate degree in anthropology from the University of Michigan in 1970, Diane Mirvis was granted an M.S. in library science in 1974, from Wayne State University. There, she became interested in integrating libraries and computers through information science course work.

As a librarian, Mirvis joined the Detroit Free Press in 1974, which had the first automated, full-text newspaper library in the country. From 1976 to 1980, she returned to Wayne State, as an assistant professor of library science, specializing in computerized information systems. After three years at home raising her now nine-year-old son, Mirvis went to the Newhouse papers in Syracuse in 1983. As a consultant to universities and industry, she has completed projects for handling text and graphics information.

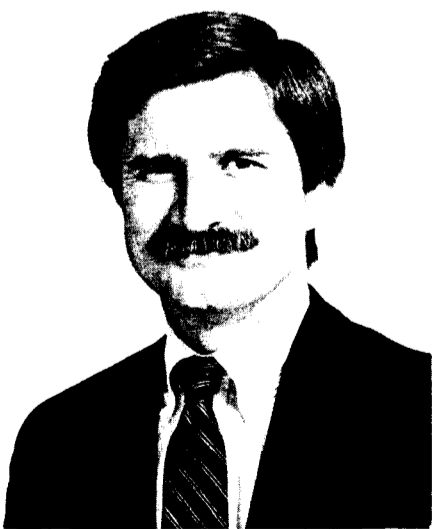
Says Mirvis, "It is my goal first to match BNL's library services to the Lab staff's patterns of using information — and then to make library research easier."

## AUI Distinguished Lecture Thomas Cochran On Private Arms Control

One of the obstacles that has long stood in the way of a Nuclear Test Ban Treaty has been verification: How can the U.S. confirm that the Soviet Union is complying with the treaty, and vice versa?

To demonstrate that verification is not an obstacle to a nuclear test ban or moratorium, the Soviet Academy of Sciences (SAS) and the Natural Resources Defense Council (NRDC), a nonprofit group dedicated to the protection of America's natural resources and the human environment, began cooperating in 1986 in an unprecedented program to operate seismic monitoring stations around the principal nuclear weapons test sites in the U.S. and the USSR.

At the NRDC, the Nuclear Test Ban Verification Project was initiated by Senior Staff Scientist Thomas B. Cochran, who now codirects that project as well as the Nuclear Program in NRDC's Washington, D.C. office. Cochran will share his expertise in this area at Brookhaven on Tuesday, December 13, when he delivers an AUI Distinguished Lecture on "Private Arms Control in Verifying a Nuclear Test Ban." His talk will begin at 4 p.m. in Berkner Hall and will be preceded by refreshments, beginning at 3:30 p.m. in the lobby.



Thomas B. Cochran

Cochran will discuss the lessons learned from the Nuclear Test Ban Verification Project, under which seismic equipment is operating at five NRDC/SAS stations in the Soviet Union and three in the U.S., in Nevada and California. Chemical explosions detonated by the NRDC and the SAS have enabled seismologists to measure the efficiency with which seismic signals from explosions prop-

(Continued on page 2)



Roger Stouenburgh

In the AGS tunnel are the technicians responsible for the high-frequency dilution cavity: (top row, leaning on the cavity, from left) Nikolaos Laloudakis, Joseph DeLong, Arthur Piper; (center row, from left) Charles Gardner, Michael Lutz and Steven Valentino; (bottom row, from left) Christopher Weaver and Robert Chmiel.

## New Cavity Dilutes AGS Beam

The high-frequency dilution cavity, one of the major new devices installed during the just-completed shutdown of the Alternating Gradient Synchrotron (AGS), first proved itself within the accelerator at 3 a.m., December 1.

The dilution cavity's job is decrease the particle-density distribution in the proton bunches within the AGS ring. In doing this, the dilution cavity will decrease the amount of beam lost during a crucial part of the beam acceleration cycle, called the gamma transition.

As the AGS will be accelerating higher intensity beams when the Booster comes on line in 1991, it is necessary to decrease the percentage of beam losses. By decreasing both the percentage and the absolute amount of beam lost, the dilution cavity will cause a reduction in the absolute amount of radiation created within the ring.

"As part of the AGS upgrade to handle higher intensity beams, we have a commitment to reduce radiation." (Continued on page 2)

## DNI Lecture: A Packaging Problem

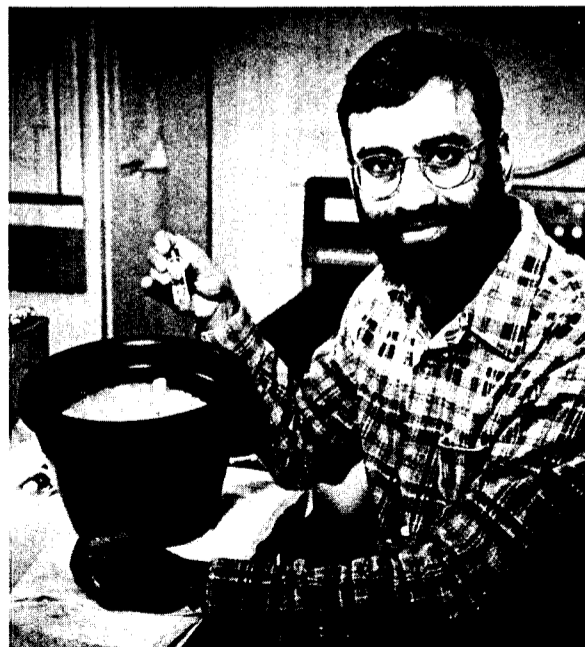
The perimeter of BNL is 11.35 miles around. Imagine trying to squeeze a string that long into a baseball. Further, imagine having to make sure that the string is arranged so that the Lab's three gates are easily accessible.

If that seems like an impossible task, think again. In biological terms, a far more difficult arrangement is achieved in every human cell, where a 1.8-meter length of DNA is squeezed into a nucleus of 10 microns or less. Yet the genes that are coded for the proteins the cell needs to carry out its special function are easily accessible.

The challenges involved in understanding the DNA structure that makes this possible will be the subject of the next Brookhaven Lecture, to be presented by Biophysicist Venkatraman Ramakrishnan, Biology Department, on Wednesday, December 14. His talk on "How DNA Is Packaged in the Cell" will begin at 4:30 p.m. in Berkner Hall, with an introduction by Richard Setlow, Associate Director for Life Sciences.

Ramakrishnan will explain that each human cell holds the same DNA. However, different types of cells use different genes of the DNA. How a cell functions is determined by the actions of proteins that are produced in those genetic regions of the DNA. So, for a skin cell to behave like a skin cell, the gene for melanin must be accessible; for an eye cell to function properly, it must have access to the gene whose protein yields rhodopsin.

A gene has controlling elements that provide the cell with signals to



Roger Stouenburgh

Venkatraman Ramakrishnan

begin or stop producing the protein. In addition to the gene itself, the controlling elements that precede and follow it must also be accessible. Ramakrishnan aims to understand the clever packaging that allows this.

When the cell is not dividing or preparing to divide, its DNA is organized as chromatin, in which the chromosomes, the genetic material, are par-

(Continued on page 2)

## AUI Lecture (cont'd)

agate and to study differences between explosions and earthquakes.

In addition, the NRDC/SAS stations were operating when U.S. and USSR governments each allowed observers to test verification devices during a nuclear explosion. This occurred in Nevada in August of this year and in the Soviet Union in September, under the two nations' Joint Verification Experiment.

After working on his thesis in the Nuclear Interactions Group in BNL's Physics Department, Thomas Cochran received his Ph.D. in Physics from Vanderbilt University in 1967. He was an assistant professor of physics at the Naval Postgraduate School in Monterey, California, from 1969-71, and a senior research associate at Resources for the Future, from 1971-73.

Since coming to the NRDC in 1973,

Cochran's areas of special focus have included nuclear weapons research and production, arms control, nuclear weapons proliferation, safeguards, seismic verification, radiation exposure standards and national energy R&D policy, principally nuclear energy issues, the breeder reactor and plutonium recycling. In 1980 he started the *Nuclear Weapons Data-book*, a continuing series detailing the world's major nuclear arsenals, and he remains director of that project.

Cochran has been a member of the Department of Energy's Energy Research Advisory Board and has served on the Nuclear Regulatory Commission's Advisory Committee on the Cleanup of Three Mile Island. He currently is a member of the Three Mile Island Public Health Advisory Board.

In 1987, Cochran received the American Physical Society Forum's Leo Szilard Award for Physics in the Public Interest, for his work on the Nuclear Test Ban Verification Project.



During Week 19 of the Team Safety program, two Plant Engineering teams became Team Safety winners. Congratulations to the Refrigeration & Air-Conditioning team and the Plumbing/Sheet Metal/Insulation team, who have both reached the goal line after being sidelined with back injuries. It was an uphill fight but you made it!

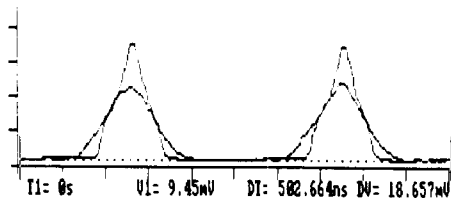
Most teams are now continuing toward their second goals, with the not-

able exception of the Heavy Equipment Shop team, the Roads and Grounds team and the Steam Shop team, who have all started on goal THREE. Time sure flies when you're buying lunches.

The commissioner is happy to report that the Safeguards & Security Division has entered with three teams — each Police Group platoon will be a team in the program, and the commissioner has been assured of a good show.

With the holidays coming, don't forget safety is important at home too! Be safe!

## New Cavity (cont'd)



Two superimposed graphs from the fast current-beam monitor showing how the dilution cavity changes the particle density from a peaked distribution to a more even distribution over time.

tion levels, to ensure both personnel safety and the maintenance of the ring," explains Michael Brennan, the head of the physics team working on the dilution cavity.

Brennan, along with technician Joseph DeLong, engineer Kenneth Reece, physicist Willem Van Asselt and engineer Alexander Zaltsman, witnessed the dilution cavity's first operation. Watching a fast beam-current monitor during a low-intensity run, with the dilution cavity off, they saw the normally sharp-peaked distribution of particle density in the acceleration buckets within the ring. With the dilution cavity on, the peak particle density was lowered by a significant 40 percent.

Now that they know it works, they will be looking at the how well it works: On or about January 2, the percentage beam losses will be measured during a slow-extracted beam run, and they are expected to be lower with the cavity on line.

In addition to the technicians pictured, those involved in developing the high-frequency dilution cavity include physicists Leif Ahrens, Joseph Kats and Eugene Raka, as well as Brennan; and engineers Peter Cameron, Dominic Ciardullo, Anne Dunbar, Walter Frey, Michael Goldman, Dan Kasha, Arthur Otis, Ralph Sanders, Paul Stein, plus Reece, Zaltsman and Andrew McNeerney, who headed the engineering team.

## On Sale Today!



Finish your holiday shopping at the Science Shop at the Exhibit Center, where these fascinating items can be found. The Science Shop, located in Bldg. 701, is open from 10 a.m. to 3 p.m. today and next Friday, December 16.



The Plumbing/Sheet Metal/Insulation Team was a Team Safety winner for the first time on December 2: (standing, from left) Rich Froelich, Henry Lewis, Bob Onco, Pete Sobik, Hugh Rhodus, Pete Stelmaschuk, Mike Stachnik, Pete Gobel, Gary Connell, Rich Werthner, Kevin Kobus, Mike Brauner; (kneeling, from left) John Connelly, Frank Ferraro; and (seated) Fred Squires. Not pictured: Ed Andersen, Steve Barcelo, Joe De Voe and Lou Graziano.



The members of the Refrigeration & Air-Conditioning Team became first-time Team Safety winners on December 2: (back, from left) John Bourquin, Pete Palamidis, Joe Fortunato, Keith Radich, Ted Carpluk, Tony Mendez, Mike Paquette, Harold Heffert (behind), Joe Buscemi, Joe Kutschera (above), Tirre Farmer, Steve Mercier, Dick Dietz; (kneeling, from left) Frank Strebel, Bob Bellando and Joe Pagano. Not pictured: Pat Browne, Kenny Crowe, Bill Devall, Larry Dilworth, Frank Garcia, Rich Jones, George Kontovrakis, Artie McMichael, Phil Ouvrard, Jerry Pringle, Dennis Reuter, Manny Rosa, Joe Scesny, Tom Trojanowski, Phil Villani, Ed Woessner, Kevin Yachnik.

## BNL Lecture (Cont'd)

tially unravelled. There is evidence that the structure of chromatin determines whether its genes are accessible.

Ramakrishnan will explain how most of the chromatin in the cell is organized as a fiber called the 30-nanometer filament. To understand details of this basic structure of chromatin, he has used neutron scattering at BNL's High Flux Beam Reactor (HFBR) and electron microscopy, with BNL's Scanning Transmission Electron Microscope.

A particular protein, histone H5, is crucial to the formation of the 30-nanometer filament. Ramakrishnan will describe his findings on how this protein binds to chromatin to promote fiber formation.

Venki Ramakrishnan received his B.S. degree in physics, from the University of Baroda in his native India, in 1971. After earning his Ph.D. in physics from Ohio University in 1976, he spent two years in the graduate program in biology at the University of California, San Diego. There he worked on the protein rhodopsin, which is involved in vision.

In 1978, he began a year at Yale University's Department of Chemistry, as a postdoctoral research asso-

ciate, which was followed by a position as an NIH postdoctoral fellow. He was a member of the team that discovered the arrangement of proteins in the 30S ribosomal subunit, using the HFBR. Also in 1978, he became a guest research associate in BNL's Biology Department.

Ramakrishnan joined the Biology Division at Oak Ridge National Laboratory in 1982. He returned to BNL in 1982 as an assistant biophysicist in Biology. He was named Associate Biophysicist in 1985 and Biophysicist in October 1988. He was an invited speaker at the International Conference on Neutron Scattering, in 1985.

All those interested in getting together with the lecturer are invited to go to a restaurant for dinner. To be part of this group, call James Hainfeld, Ext. 3372.

## In Memoriam

**John H. Cusack**, who retired in October 1986 but was still associated with BNL as a consultant in the Department of Nuclear Energy, died on November 15 at the age of 61.

At the time of his retirement, Cusack was a senior chemist/engineer and had been at BNL for over 20 years, since September 1966. He was a resident of Miller Place and is survived by his wife and two children.

## Arrivals & Departures

### Arrivals

Richard F. Kurz Jr. .... Accel. Dev.  
Carol Lambert ..... Medical  
Frank C. Lincoln ..... Physics  
Luis A. Riollano ..... Staff Serv.  
Jeffrey M. Stuart ..... Accel. Dev.  
Douglas D. Wood ..... Accel. Dev.

This list includes all employees who have terminated from the Laboratory, including retirees:

### Departures

Donald DiMarzio ..... DAS  
Aristides A.N. Patrinos ..... DAS

It has been learned that **Jack E. Jensen**, a former senior mechanical engineer in the Alternating Gradient Synchrotron Department, died on October 20.

Jensen joined the Bubble Chamber Group in 1957 and subsequently transferred to the Power Transmission Project. He left the Lab in 1981. He was retired in Florida and is survived by his wife Mitzi and their three children.

## Beautiful Music in Berkner



Los Angeles Piano Quartet

America's premier piano quartet, the Los Angeles Piano Quartet, will present a concert in Berkner Hall on Wednesday, December 14, at 8:30 p.m.

Founded in 1977, the Los Angeles Piano Quartet has won critical acclaim in concerts around the world. This unique ensemble offers audiences the opportunity to hear the glorious piano quartet literature, as played by four musicians who have the technique and bravura of soloists, as well as the sensitivity and tight ensemble of fine chamber players.

The quartet includes violinist Joseph Genualdi, who has received the Concours D'Evian gold medal, the Naumberg Award and the Grand Prix du Disque; violist Ronald Copes, who

is also a distinguished violinist and has recorded for Orion, CRI and Columbia Records; cellist Peter Rejto, winner of the International Young Concert Artists Award; and pianist James Bonn, who has collaborated with such conductors as Arthur Fiedler and Antal Dorati and can be heard on nine solo recordings.

On the program for December 14 are Mozart's Duo for Violin and Viola in G Major, K.423; Faure's Piano Quartet No. 2 in G Minor, Op. 45; and Dvorak's Piano Quartet in E-Flat Major, Op. 87.

Tickets for the concert can be purchased at the door the night of the performance. Prices are \$9 for general admission, \$6 for students and those over age 65, and \$5 for those under 18.

## Macintosh Seminars

The on-site Macintosh Computer Center is offering the following seminars next week. All seminars run from 10 a.m. to noon, with the last hour devoted to questions and answers.

Date	Subject
Monday, December 12	Introduction to the Macintosh
Tuesday, December 13	Macintosh to IBM 3270 Connectivity
Wednesday, December 14	Macintosh Desktop Publishing

The seminars will be held in the seminar room on the second floor of the Computing & Communications Division, Bldg. 515. Any suggestions on these or future topics are appreciated. To sign up or get more information, contact Robert Carlson at the Computer Center, Ext. 3895.

## P-CAD Users Group

The first formal Users Group Meeting for P-CAD, an electronic computer-aided design package, will be held in the Computing & Communications Division seminar room, on the second floor, Bldg. 515, on Wednesday, December 14 at 1 p.m.

Henry Diaz will give a presentation on using P-CAD's Electronic Bulletin Board System. The meeting will be conducted by Chris Kushmerick, who can be reached at Ext. 3422, Bldg. 463, or by electronic mail, Kushmerick@BNLCL1.

## Do You Have the Right Stuff?

**Give Blood!**



If you meet the American Red Cross' strict criteria and pass their preliminary exams with flying colors, you, indeed, have the right stuff: healthy blood.

Having the right stuff means that you can be a hero: By donating blood, you can help save the lives of people in need of a transfusion of whole blood or blood products.

Your next opportunity to donate blood on site and be a hero is on Wednesday, December 21, or Thursday, December 22, from 10 a.m. to 3 p.m. at the Brookhaven Center. To give during BNL's annual winter blood drive, please return the pledge card you received in the mail to blood drive chair Susan Foster, Bldg. 185, before December 9.

Though it is the holiday season, accidents and illnesses are not seasonal. So over the eight nights of Hanukkah and throughout the 12 days of Christmas, people will be needing transfusions. Because it can't be

manufactured commercially, healthy, red blood can't be bought with all the green money in the world — but you can donate the gift of life if you have the right stuff.

To ensure a safe blood supply and donors' safety, blood donors must be between the ages of 17 and 75 years old, weigh at least 110 pounds and not have donated blood within the last 56 days. According to the American Red Cross, donors cannot get AIDS or any other diseases by giving blood.

Those who may not donate blood include people who have acquired immune deficiency syndrome (AIDS) or are at high risk for getting the disease; or have cancer, insulin-dependent diabetes, epilepsy, heart disease, stroke or hepatitis.

If you have any questions about donating blood or the BNL winter blood drive, contact your department or division's blood drive captain, or call the blood drive hot line, Ext. 5126.

## Cooking Exchange

Hanukkah treats will be featured at the next meeting of the International Cooking Exchange. The meeting will be held on Wednesday, December 14, from 12:30 to 2:30 p.m., in the Recreation Building in the apartment area on-site.

All off-duty employees and their families are invited to the Cooking Exchange meeting. A fee of \$2 per adult is used to help defray the cost of the ingredients used in the recipe demonstration, after which everyone may sample the dishes prepared. Babysitting is provided at 50¢ per child.

## Christmas Party

The Cooking Exchange will hold a Christmas party on Thursday, December 15, at 7 p.m., in the Recreation Building.

All members of the Lab community are invited. There is a \$2 charge per person to cover the cost of drinks, etc. Please bring a favorite dish to share. This is a party for adults — please do not bring children.

## Rifle & Pistol Club

The next meeting of the Rifle & Pistol Club will be held during lunch on Wednesday, December 14, in Room 202, Building 911B. Please attend for information about our indoor range and winter shotgun activities. For more information, call Otto Jacobi, Ext. 3471.

## United Way Donations Reach New Heights

As of Wednesday, December 7, BNL's had contributed \$99,200 to this year's United Way campaign — a mere \$800 shy of a nice, round \$100,000. This incredibly generous amount is about \$6,000 more than had been donated at the end of November, when BNL's formal campaign ended, and almost \$30,000 more than Lab employees gave last year.

Contributions will be accepted until the end of the year and may be sent to Betty Pergan, Bldg. 179A. If you have questions or need a pledge card, call Campaign Chair Susan Foster, Ext. 2888.

### Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

## Bowling

### Red/Green League

J. Connelly rolled a 227/223/207 for a 657 scratch series, M. Guacci 235, C. Bohnerblusch 224, N. Parrinello 223, K. Riker 223, J. Ferrante 218, L. Schairer 214, R. Mulderig 213, J. Morris 210, K. Asselta 202.

### Purple League

Ed Beadle bowled a 219, Ben Belligan 217/205, Marsha Kipperman 198/192, Karen Vogel 196, Gail Schuman 180.

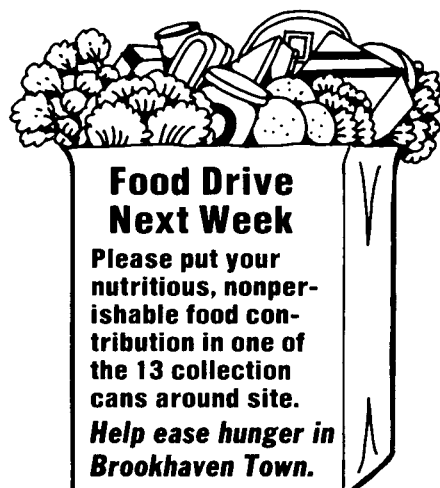
### White League

Ed Meier had a 222, Ken Riker 212, Andy Warkentien 207, Jim Marsch 204, Ted Erickson 203, Gerry Riker 200, Pat Manzella 197, Joyce Pinelli 185/180.

## Volleyball

### Standings - Week of November 28

League I		League II	
Upfagrab	16-2	Fossils	16-5
Dinkers	16-5	Nuts & Bolts	16-5
Xrayted	13-5	Set-Ups	16-5
Sourcerers	9-12	Krush	14-7
Phoubars	4-17	Ziegfield VOLLIES	8-13
Netminders	2-19	Slammers	7-14
		Upton-Ups	4-17
		Chunga's Revenge	3-18
League III		Open League	
Frazzled	18-0	Dig Your Lips	15-3
MISfits	13-5	Tom's Mutants	13-5
High Volley'em	10-8	Meriem's Team	12-3
Sourcerers	10-8	Phoenix	12-3
Printouts	8-10	Magnum	7-8
Spikes	6-12	VOLLIES	6-12
Renegades	4-14	Rowdy Radicals	4-11
Good Timers	3-15	Pi Chu	3-12
		Constables	0-15



**Food Drive Next Week**  
Please put your nutritious, nonperishable food contribution in one of the 13 collection cans around site.  
Help ease hunger in Brookhaven Town.

Food drive containers are located in the following buildings:

- 1005S — Accelerator Development
- 911 — AGS
- 463 — Biology
- 515 — Computing & Communications
- 488 — Cafeteria
- 555 — Chemistry
- 475 — Applied Science
- 134 — Cashier, Fiscal
- 197 — Graphic Arts
- 535B — Instrumentation
- 725 — NSLS
- 185 — Personnel
- 510 — Physics
- 477 — Research Library
- 179 — Staff Services

## 1989 Holidays

Holiday	Holiday Observed:	Day	Date
New Year's Day		Monday	January 2
Floating Holiday (Martin Luther King Jr.'s Birthday)		Monday	January 16
Presidents' Day		Monday	February 20
Memorial Day		Monday	May 29
Floating Holiday		Monday	July 3
Independence Day		Tuesday	July 4
Labor Day		Monday	September 4
Veterans Day		Friday	November 10
Thanksgiving Day		Thursday	November 23
Day after Thanksgiving		Friday	November 24
Christmas Eve		Friday	December 22 (1/2 day)
Christmas Day		Monday	December 25

# BROOKHAVEN BULLETIN

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