

Particle Post

July 2005

There is no way to happiness. Happiness is the way.

--Wayne Dyer

A Note From Our Chairman

Thank you to the C-AD Barbeque Committee, all the chefs that provided us with delectable lunch entrees, all the folks that set up the tables, tents, grills etc., our photographer and especially to Pam Manning who orchestrated the huge effort. It was obvious that everyone had a great time. I was delighted to meet many of our former colleagues who decided to spend lunchtime with us during their "busy" day activities. I urge everyone to view Rippie Bowman's beautifully done slide show of the festivities.

We are now into the summer shutdown season. RHIC running ended in late June and the NSRL and NASA AGS run are now done. I would like to remind everyone that whatever tasks we are undertaking, please think safety before acting. Please keep up this year's much improved safety performance. We have had two occurrences that involved slips and falls. Both of which, one could classify as not task related. This tells us that we also have to be aware of our surroundings even when we are not particularly involved with a job related task.

We have just completed the annual DOE Nuclear Physics program review. The committee was impressed with the C-AD performance in accelerator operations and short term and longer term research and development, over the past year. Congratulations to everyone on our performance. At the end of this month, the EBIS project will be reviewed as part of the Critical Decision 1 (CD1) process. This will allow us to complete the technical, cost and schedule details before the start of construction in 2006. EBIS will be a joint DOE and NASA supported project. NASA will be contributing about 25% of the cost and the first money has already arrived at C-AD.

I would like to remind everyone that if you don't use it (vacations days), you lose it and it costs C-AD money. The funds that are set aside for each vacation day, that you have beyond 20 days at the end of the fiscal year, is not returned to C-AD but goes into the general pool to subsidize other departments and divisions. So take your vacation days, you have earned them and save us money.

Don't forget that on August 21, RHIC will host the BNL Summer Sunday. We need volunteers to help

us. Please contact Yousef Makdisi and help us out.

Enjoy the summer.



Derek Lowenstein



Administration

RHIC Operations cost for June was \$9.3M. Machine power of \$1.1M reflects May consumption. Currently estimated funding available for shutdown activities is substantially less than in FY 2004 so it is critical that we defer purchases and/or deliveries where appropriate and limit authorized overtime to only that which is essential.

Preparations are in process for the EBIS CD-1 Project Review scheduled for Monday, July 25 through Wednesday, July 27. A successful review insures timely arrival of construction funding planned for FY 2006.

Monthly employees in the both the Collider-Accelerator Department and the Superconducting Magnet Division have begun utilizing the Laboratory's Electronic Time Reporting System (ETR). The first completed time cards will be submitted for the period ending July 20, 2005.

Access to the time card entry software is through the PeopleSoft HR Employee Self Service Module, which can be accessed from the Human Resources Home Page on the BNL Web Site. This is the same PeopleSoft module you may have used to verify your emergency contact information, view the statement issued with your monthly paycheck or check your vacation and sick leave balances.

Ann Lamberti is coordinating the implementation effort for Electronic Time Reporting. She should be your first point of contact for any problems you experience using the new system. Questions related to payroll policy should be addressed directly to the Payroll Office on extension 2470.

Stephanie LaMontagne-McKeon



PHENIX

PHENIX would like to thank the entire CA-D division for the tremendous efforts that have made Run 5 such an outstanding success. We are grateful for the long hours and hard work of the people who have made possible many new and exciting physics measurements.

The primary PHENIX goals of Run 5 were to obtain a 200 GeV Cu+Cu data sample, and to collect

sufficient luminosity with high polarization to allow a precision measurement of the double-spin asymmetry A_{LL} . The study of many physics observables, already measured in Au+Au collisions in Run 4, will allow us to further probe the nature of nuclear matter through high statistics measurements in a lighter system. The high-statistics measurement of A_{LL} using neutral pions in polarized proton collisions will make possible the first high sensitivity physics measurements of gluon polarization.

Several improvements were made to PHENIX for Run 5. A full sector of Aerogel Cherenov counter was completed and operated for the first time in Run-5. This device will enable PHENIX to significantly extend the momentum range over which we can separate particle species. The PHENIX data acquisition system was upgraded and achieved event rates $>5\text{kHz}$ for pp collisions, and additional data buffering was added in the counting house to accommodate this higher rate. After extensive testing in previous runs, PHENIX enabled and took data with the multi-event buffering feature of the front-end electronics. This allows us to take data at high rates with very little dead time ($\sim 5\%$). Additional Local Level-1 triggers for the muon arms and the central arm calorimeter and RICH detectors were commissioned and used for data taking. Highly selective Level-1 triggers and the addition of multi-event buffering allowed PHENIX to sample the full luminosity delivered by the collider. The addition of an online calibration and Level-2 event filtering effort allowed PHENIX to process highly enriched samples of rare physics events and reconstruct these samples within a day of having been collected.

In addition to the improvements outlined above, additional upgrades to PHENIX were tested in Run 5. A prototype of a time-of-flight detector for the west arm (TOF-W) using RPC technology was successfully tested during the CuCu run. Additional RPC chambers were also installed in the south muon arm as a test for an upgrade of the muon trigger for high luminosity pp running at $\sqrt{s}=500\text{ GeV}$.

The 200 GeV Cu+Cu portion of Run 5 was extremely successful, with PHENIX recording 1.0 billion minimum bias events and sampling over 8.6 billion events, with a total sampled integrated luminosity of 2.9 nb^{-1} . A data sample of this size is roughly equivalent in sampled parton-parton luminosity as the Run 4 Au+Au dataset, allowing optimal overlap for comparison of rare probes between these two systems. Analysis of the Level-2 filtered dataset has yielded $\sim 12,000$ J/Psi in the dimuon channel, approximately 1,200 J/Psi in the dielectron channel, and neutral pions out to a transverse momentum of about $20\text{ GeV}/c$. The huge Run 5 data sample will allow detailed investigations of exciting phenomena, such as jet quenching and J/Psi suppression, in a lighter system.

In addition, to the very successful 200 GeV Cu+Cu portion of Run 5, the addition of fifteen days of Cu+Cu collisions at 62.4 GeV was a phenomenal success. The quick RHIC setup and reliable RHIC operation allowed PHENIX to acquire a 62.4 GeV minimum bias data sample of 425 million events and to sample a total luminosity of 92 nb^{-1} . This data sample is comparable in parton-parton luminosity to the 62.4 GeV Au+Au sample collected in Run 4 and will provide a valuable comparison at lower energy.

The successes of the Cu+Cu portion of Run 5 were followed by similarly impressive developments in the polarized proton program. The consistently high polarization in RHIC enabled PHENIX to reach 205 nb^{-1} in the figure of merit $P^4 L$. This achievement, which was very close to our ambitious goal of 226 nb^{-1} , made possible a very timely high-statistics measurement of A_{LL} and will offer insights to the polarization of the gluon in a polarized proton.

The effort put forth by CA-D to demonstrate collider operations at 410 GeV with substantial polarization was impressive. Data taken by PHENIX during the brief 410 GeV run demonstrated that our local polarization measurements will continue to be sensitive during future 500 GeV p+p runs at RHIC. In addition, the construction, installation and commissioning of the AGS cold snake was also underway during Run 5. Both of these developments signal a very strong future for the spin program

at RHIC!

Once again, PHENIX wishes to express its appreciation to the entire CA-D for the hard work and strong performance of the RHIC accelerator complex. The high level of reliability, understanding, and control of the accelerator system attained in Run 5 demonstrates that RHIC is a premier facility. We look forward to equally outstanding performance from RHIC in the future.

John Lajoie (PHENIX Run Coordinator for Run-5)



RHIC Summer Study

As you probably know that the BNL Summer Sunday Open House have started and the RHIC Open house is scheduled for Sunday August 21. Newsday has covered the event with a full page spread in the Friday July 8 issue.

As has become our custom we are planning to have the visitors tour the Lobby of building 1005 and the Collider Tunnel underneath in addition to the two large experiments PHENIX and STAR. The tours, organized by the BNL Community Relations Office, will start with a short introductory presentation describing RHIC and the physics program at Berkner Hall and the buses will start rolling a little after 9:00 am and continue till 3:30 or 4 PM to clear everyone out of the premises.

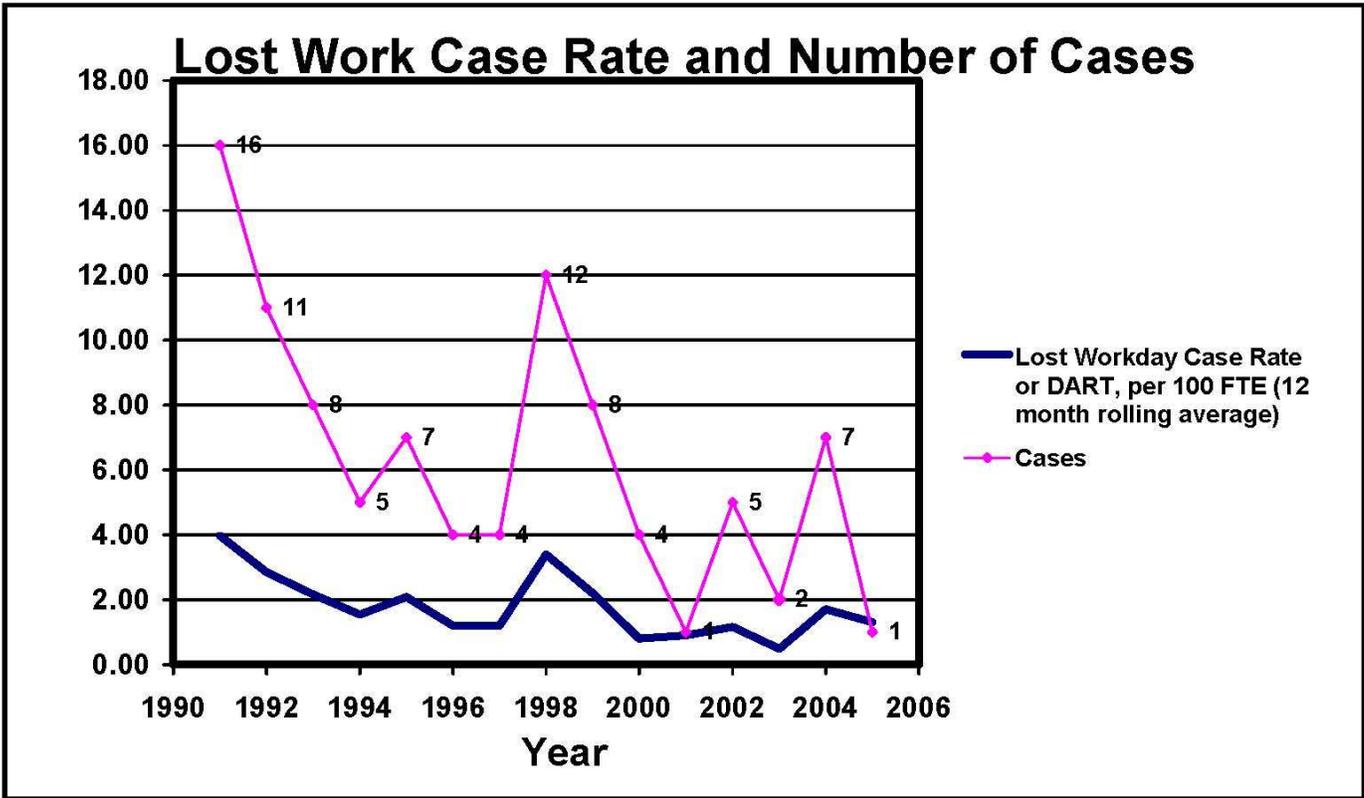
This is our chance to take pride in what we have accomplished and showcase our work to a deserving and supportive public. We need your help to give the introductory presentation, tours in the 1005 Lobby and inside the Tunnel, and to accompany the buses and give an overview of the laboratory and RHIC as they make their way from Berkner Hall to RHIC and answer some questions on the way back. STAR and PHENIX will be staffed by volunteers from the respective experiments.

If the past is a guide, the RHIC Sunday will be the busiest during which over a thousand people will come through. Depending on the number of volunteers, we can run two shifts. If you are available, please send me a note (makdisi@bnl.gov) and include when you can help (morning, afternoon, or even better all day). Let us play the perfect hosts and make this important opportunity a success.

Yousef Makdisi



!!Safety Stats!!



C-AD Occupational Injury Statistics

For Year 2003 For Year 2005

First Aid Cases	5	0
Recordable Cases	11	2
Lost Work Cases	4	1

REMINDER: TLD exchange is done the **FIRST FRIDAY** of the Month.

NEXT EXCHANGE: Have your TLD on its assigned badge board by **Friday, AUGUST 5, 2005**

Pete Cirigliaro



Arrivals

Vernon Mickle, a student assistant working with George Mahler started June 20, 2005.

Welcome

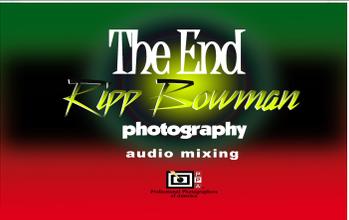
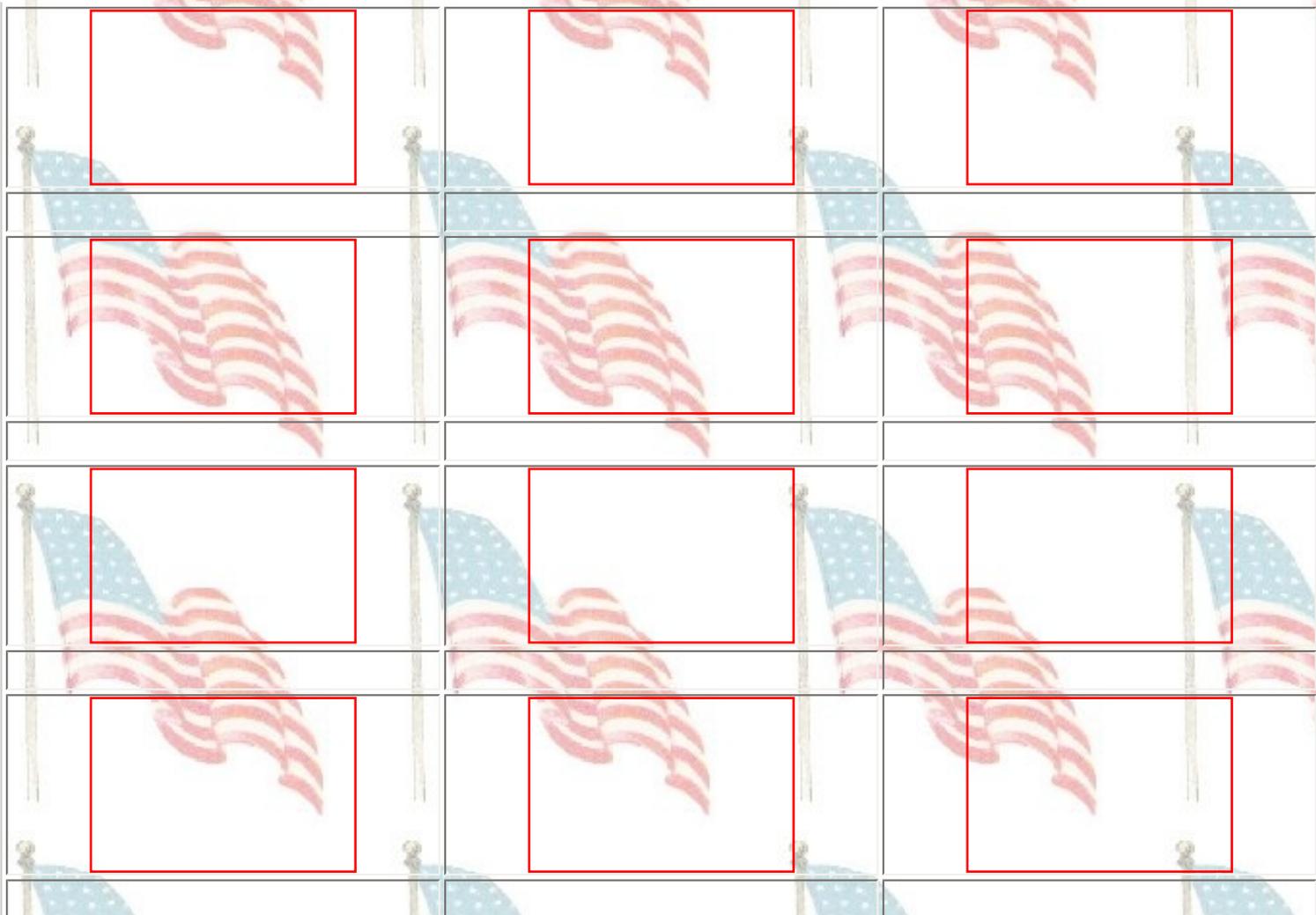


Congratulations to Christoph Montag and his wife, who gave birth to Misa Nicole on June 25 at 02:43, 49.5 cm (19.48" long), 3100 g (6.91 lbs). Mommy and Baby are very well. Suzune is very happy to have a little sister.



Congratulations





I would like to thank Ripp Bowman for his excellent photography and putting together the digital slide show. I have copies of the slide show on CDs if anyone is interested please contact me. I would also like to thank Larry Arnold for making a video of our BBQ, I-Hung for his delicious salmon, Stacey and her husband for their fantastic chicken and special kudos to Ray Dumont for his wonderful music. And lastly, I would like to thank the whole C-AD BBQ committee for without you this BBQ would not have been a success. THANKYOU.

Pamela Manning

Eastern Phoebe Nest (BNL RHIC Ring 2:00)



Submitted by James Osterlund--Spotted and identified by Terry Higgins of the Vacuum Group



Daily Crossword : July 14

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Across

- 1 Oompah instruments
- 6 Skeleton part
- 10 __ facto
- 14 "I can take __!"
- 15 Alpine goat
- 16 Swabs
- 17 Monarch
- 18 Sing blithely
- 19 Persian fairy
- 20 Jim Carrey film
- 22 Beneficiary
- 24 Burger garnish
- 26 UAR VIP
- 27 Tines
- 30 Rob of "Melrose Place"
- 32 Terbium, e.g.
- 34 Some Balts
- 38 Climbing plant
- 39 Carafe quantity
- 41 Regret
- 42 Intermingle
- 45 Significant event
- 48 Japanese noodle dish
- 50 More difficult
- 51 Loud noise
- 54 Rank
- 56 Touched up
- 58 Brother of Tamar, in the Bible

1	2	3	4	5		6	7	8	9		10	11	12	13
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17						18					19			
20					21		22		23					
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51	52	53					54	55						
56						57		58				59	60	61
62						63		64			65			
66						67					68			
69						70					71			

- | | | |
|--|---|---|
| <ul style="list-style-type: none"> 70 Pretentiously artistic 71 Country in East Africa | <ul style="list-style-type: none"> 11 "Dead __ Society" 12 Bender 13 Wickerwork branch 21 Rope material 23 Scottish Celt 25 Catching 27 Stiffly formal 28 Sitarist Shankar 29 Large antelope | <ul style="list-style-type: none"> 43 Archaeological period 44 Old ointment 46 Pathetically inept one 47 Spinning-wheel attachment 49 Sicilian spouter 51 Transplant, in a way 52 Sister of Anne and |
|--|---|---|

58 Brother of Tamar, in the Bible
62 Middle East bread
63 Author Morrison
65 Idolize
66 Designer Cassini
67 It may be common or proper
68 Wooden-soled shoes
69 Phoenician port

2 "Nope!"
3 Digestive juice
4 Windflower
5 Unfamiliar
6 Ernie of Fort Baxter
7 Japanese sash
8 Title role for Jodie Foster
9 Scope
10 Stalemate

28 Statist Shaikal
29 Large antelope
31 Author Silverstein
33 Cold coating
35 Stepped
36 Melody
37 Prophet
40 Post-op therapy

51 Transparent, in a way
52 Sister of Anne and Charlotte
53 Dwindle
55 It's not fair!
57 Portal
59 Diving bird
60 Debauch
61 Tableland
64 Pecan, e.g.

Solution shown at the end of the calendars.



Did You Know?

SCAM ALERT

There's a new crime in cybertown. Similar to phishing (a bit of e-mail trickery wherein a con artist pretending to be your bank asks you to confirm account information), this new ruse is called "pharming". Perpetrators set up a fake Web site that looks like a popular legitimate site (Amazon, eBay, etc.), then wait for innocents like you to come by to shop. The site then "harvests" your information. You can avoid being pharmed by keeping your eyes peeled. Pharmers tend not to use secure sockets layer (SSL) encryption and hope you won't notice. (If SSL is active, you'll see a lock icon in your browser.) To use SSL, the pharmer needs to forge a certificate, which will be flawed. When connecting, a warning should pop up claiming "the name on the security certificate is invalid" or that "the security certificate was issued by a company you have not chosen to trust."

Yield to Pedestrians

New York has a new law making it safer to use crosswalks:

- Slow down or stop for pedestrians crossing any part of the crosswalk.
- Crosswalks can be marked or unmarked at corners and intersections.
- Slow down or stop for pedestrians crossing 4 or 6 lane roadways.
- For separated/divided roads, slow down or stop only on your side of the road.
- Trucks/Buses slow down or stop.
- Bicyclists slow down or stop.

Tips for Sharing the Road

- **WATCH** for pedestrians near the roadway.
- **SLOW** or stop for pedestrians using crosswalks.
- **SLOW** or stop for pedestrians when turning right or left.
- **USE CARE** if another car slow/stops for a pedestrian.
- **LOOK FOR** pedestrians walking in the road without sidewalks.
- **FOLLOW** all signals, signs and stripes at crosswalks.
- **KNOW** that pedestrians with dark clothes are hard to see at night.
- **DON'T** speed or park where pedestrians use crosswalks.

Funded by the National Highway Traffic Safety Administration with a grant from New York State Governor's Traffic Safety Committee.

Government Officials

- *President George Bush (202) 456-1111, president@whitehouse.gov, www.whitehouse.gov
- *US Government's Official Web Portal, <http://www.firstgov.gov>
- *Senator Hilary Clinton (202) 224-4451, <http://clinton.senate.gov/>
- *Senator Chuck Schumer (202) 224-6542, <http://schumer.senate.gov/>
- *US Congressman Tim Bishop (631) 696-6500, <http://www.house.gov/timbishop/zipauth.htm>
- *US Congressman Steve Israel (631) 951-2210, <http://www.house.gov/israel/index.htm>
- Governor George Pataki (518) 474-8390, <http://www.state.ny.us/governor/>
- State Senator Caesar Trunzo (631) 360-3236, <http://www.senatortrunzo.com/>
- State Assemblywoman Ginny Fields (631) 589-8685, <http://assembly.state.ny.us/mem/?ad=005>
- State Assemblywoman Patricia Eddington (631) 207-0073, <http://assembly.state.ny.us/mem/?ad=003>
- County Executive Steve Levy (631) 853-4000, county.executive@suffolkcountyny.gov

- Suffolk County Legislator, <http://www.co.suffolk.ny.us/legis/>

*Essential to supporting BNL's mission.



*We wish all of you born in **JULY**
a happy and healthy year ahead.*

Birthday people ONLY click on cake



Service Awards

for June

35

Frank Dusek

30

Brian Briscoe

25

Joseph Curley
Joseph Tuozzolo

20

John White, Jr.

10

David Loughlin



Dive Into Bob Marascia's Farewell Party

Wednesday, July 27th, 6pm
Rock Hill Country Club, Manorville
\$32/pp includes Buffet Dinner
Soda, Coffee & Gift
(cash bar)

Dress Tropical Casual

RSVP by Friday, July 22nd
to DJ Greco, Ext. 3555, Bldg. 460

ALUMNI NEWS: AGS/RHIC/C-AD RETIRED CROWD -We'd enjoy hearing from you and what you're up to! Send your notes to pmanning@bnl.gov

email received from Penny LoPresti

Here is something I came across on the internet that perhaps those from the 50s and 60s will remember fondly.

http://www.doo-wop.org/doowop_001.htm

Enjoy each day for it is a precious gift
Penny and Ray

You can catch up on all of Eric Forsyth's travels by clicking on his sailing yacht below



July 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4 Holiday	5 Holiday	6	7	8	9

<p>10</p> 	<p>11</p> 	<p>12</p> <p>Physics Colloquium "Experimental Test of High Field Electrodynamics in the Physics Department's Accelerator Test Facility" Vitaly Yakimenko, BNL - Physics Department Hosted by Ilan Ben-Zvi 3:30 PM, Large Seminar Room, Bldg. 510</p>	<p>13</p> 	<p>14</p> <p>Digital Slide Show of C-AD BBQ, Snyder Seminar Room</p>	<p>15</p> <p>C-AD AP Seminar "RHIC Refrigerator Upgrade" A. Sidi-Yekhlef, R. Than, J. Tuozzolo, 4pm Bldg. 911B LCR Timecards Due</p>	<p>16</p> 
<p>17</p> <p>Summer Tour Investigate our living world through life sciences. 10am-3pm Berkner</p>	<p>18</p> 	<p>19</p> 	<p>20</p> <p>406th Brookhaven Lecture "Advanced combustion technology" Thomas Butcher, ES&T 4:00 PM, Berkner Hall Auditorium</p>	<p>21</p> <p>Summer Student Talent Show, 7pm Berkner Hall</p>	<p>22</p> 	<p>23</p> 
<p>24</p> <p>Summer Tour Explore the wonders of chemistry and nanoscience. 10am-3pm Berkner</p>	<p>25</p> 	<p>26</p> 	<p>27</p> <p>Bob Marascia's Farewell Party 6pm Rock Hill Country Club</p>	<p>28</p> 	<p>29</p> 	<p>30</p> 
						

31

Summer
Tour Enjoy
interactive
exhibits at
the science
museum on
Family Fun
Day. 10am-
3pm Berkner



August 2005

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7	8	9	10	11	12	13
Summer Tour See how light is used to make discoveries at the National Synchrotron Light Source. 10am-3pm Berkner						

14	15	16	17	18	19	20
Summer Tour Celebrate the World Year of Physics and more on Celebration Sunday. 10am-3pm Berkner			Timecards Due			
21	22	23	24	25	26	27
Summer Tour Visit the Relativistic Heavy Ion Collider, where physicists probe the beginning of the Universe. 10am-3pm Berkner						
28	29	30	31			



1	T	2	U	3	B	4	A	5	S		6	B	7	O	8	N	9	E		10	I	11	P	12	S	13	O			
14	A	H	I	N	T						15	I	B	E	X					16	M	O	P	S						
17	R	U	L	E	R						18	L	I	L	T				19	P	E	R	I							
20	T	H	E	M	A	21	S	K			22	L	E	23	G	A	T	E	E											
				24	O	N	I	O	25	N		26	N	A	S	S	E	R												
27	P	28	R	29	O	N	G	S			30	E	31	S	T	E	S													
32	R	A	R	E	E	A	33	R	T	H		34	L	E	35	T	36	T	37	S										
38	I	V	Y						39	L	I	T	E	40	R				41	R	U	E								
42	M	I	X	43	I	44	N			45	M	I	L	E	46	S	47	T	O	N	E									
				48	R	A	49	M	E	N		50	H	A	R	D	E	R												
51	R	52	E	53	P	O	R	T			54	G	55	R	A	D	E													
56	E	M	E	N	D	E	57	D			58	A	B	S	A	59	L	O	60	M										
62	P	I	T	A					63	T	O	64	N	I			65	A	D	O	R	E								
66	O	L	E	G					67	N	O	U	N				68	C	L	O	G	S								
69	T	Y	R	E					70	A	R	T	Y				71	K	E	N	Y	A								

Editor: [Pamela Manning x4072](#)

We Remember
Sept. 11, 2001