

# Media & Communications @ Brookhaven National Laboratory

*RHIC & AGS Users Executive Committee Meeting*

October 14, 2011

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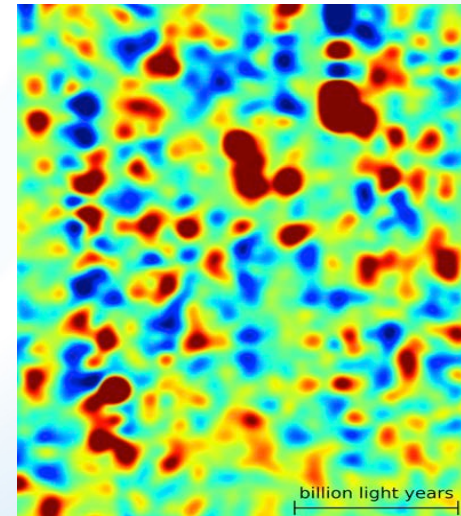
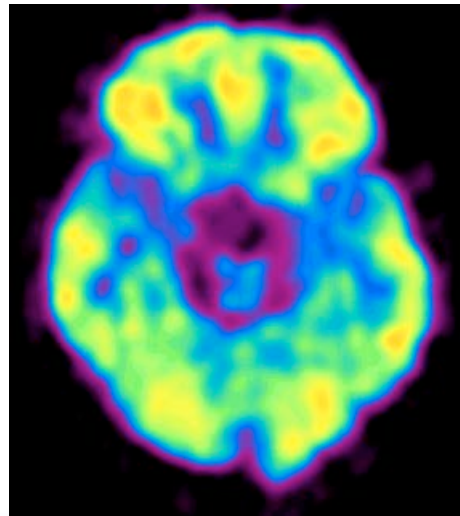
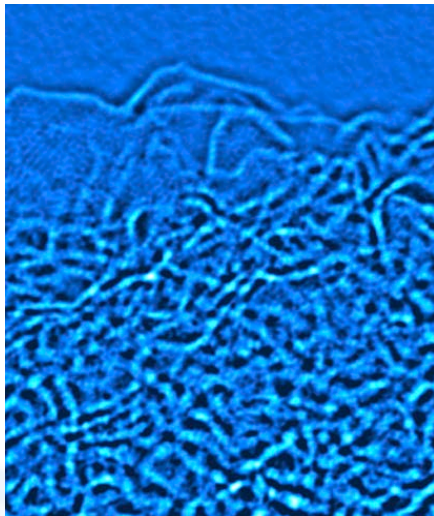


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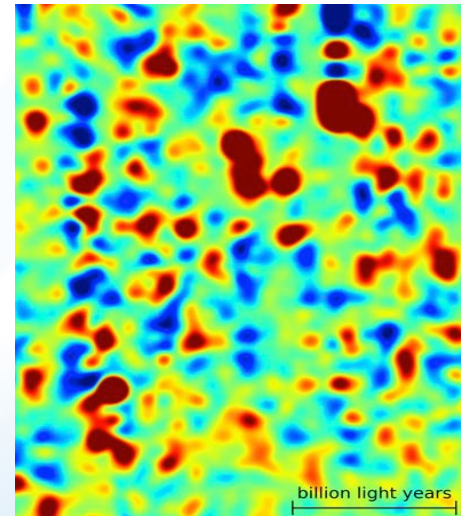
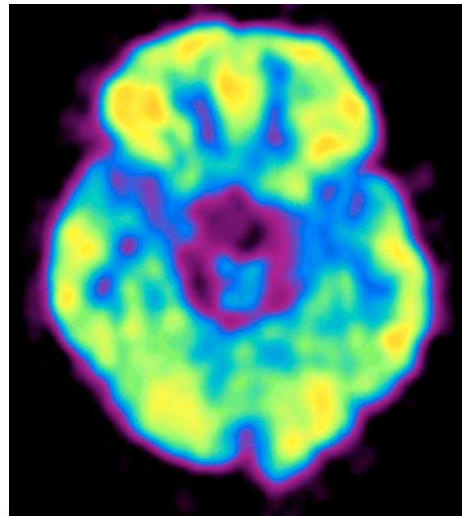
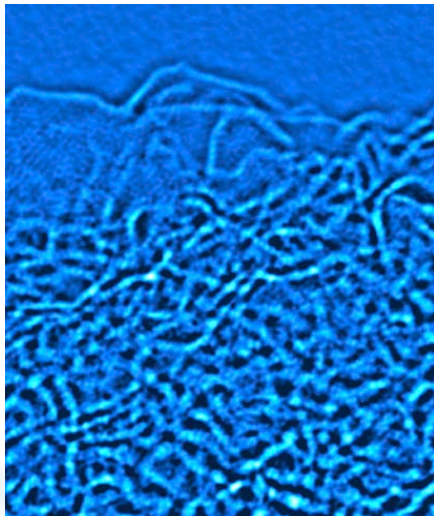
# Science Communication and Media Outreach

*You do not really understand something unless you can explain it to your grandmother.*  
- Albert Einstein



# Science Communication and Media Outreach

*You do not really understand something unless you can explain it to your grandmother. . . . or your neighbor, your childhood friend, and your mother-in-law . . . not to mention congressional representatives, funding agency staffers, and potential research and business partners.*



# ***Science Communication and Media Outreach: Goals***

- Promote and position Brookhaven National Laboratory as a center for scientific excellence and innovation
  - Tie to priority projects and initiatives (Strategic/Annual plans)
- Report to the taxpayers *and* agencies that fund our research
  - What are we doing with their money?
  - What are they getting out of it?
  - Why should they keep supporting what we do?
- Communicate the complexities and importance of science
  - “Educate” the public
  - Inspire future scientists
  - Build support for the scientific enterprise
  - Demonstrate the value of DOE's investment in basic and applied research



# Communication “Products”

- Press releases — to stimulate interest among (science) reporters to cover our research, with second life as:
  - Web stories (our site and others)
  - Brookhaven Bulletin stories
  - Content for other products
- Fact sheets/brochures
- Video/animation scripts
- Proposals for symposia (AAAS)
- Press events
- Presentation slides
- Posters/exhibits/displays
- Tweets/blog posts
- Science highlights
  - For BSA, DOE, Battelle, etc.



# Challenges

- Identifying stories/getting notification of papers
- Complicated, sometimes esoteric science
- Approval process (internal/external)
- Short turnarounds/deadlines
- Managing expectations
- Building/maintaining relationships
- Changing media landscape
- Balance between keeping BNL in the news vs. flooding reporters with news they don't want
- Competing internal demands

## How Topological Defects Couple the Smectic Modulations and Intra-unit-cell Nematicity of the Cuprate Pseudogap States

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\*These authors contributed equally to this work

We study the coexisting smectic modulations and intra-unit-cell nematicity in the pseudogap states of underdoped  $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+\delta}$ . By visualizing their spatial components separately, we discover  $2\pi$  topological defects throughout the phase-fluctuating smectic states. Imaging the locations of large numbers of these topological defects simultaneously with the fluctuations in the intra-unit-cell nematicity reveals strong empirical evidence for a coupling between them. From these observations, we propose a Ginzburg-Landau functional describing this coupling and demonstrate how it can explain the coexistence of the smectic and intra-unit-cell broken symmetries, and also correctly predict their interplay at the atomic scale. This new theoretical perspective can lead to unraveling the complexities of the phase diagram of cuprate high- $T_c$  superconductors.



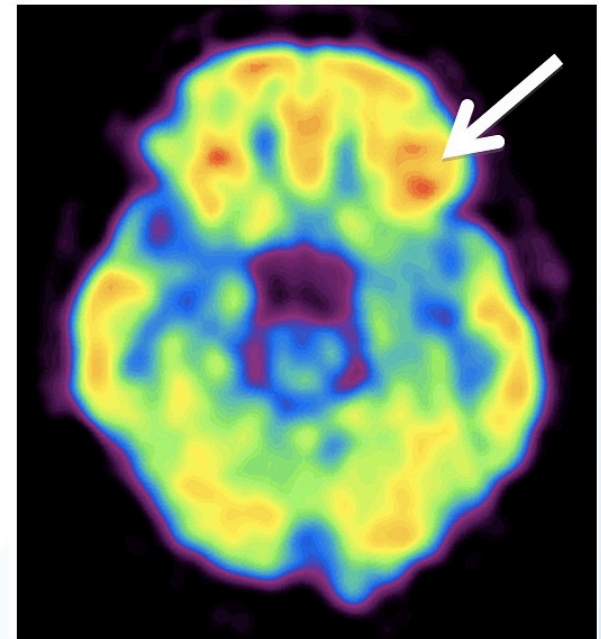
# Identifying stories

- Promote Lab priority projects
  - Plan events/news releases to highlight major findings/milestones
- Major publications in *Science*, *Nature*, and other top-tier journals such as *PNAS*, *JAMA*, *PRL*
- Beat system for staying in touch with Lab managers, department chairs, key scientists; vetting “newsworthiness”
- Talks at important meetings (AAAS, APS, ACS)
- “Piggybacking” on releases from other institutions
- Word of mouth, weekly Med/Com planning meetings

# Media training for scientists

- Identify spokesperson(s)
- Prepare/rehearse messages
  - Simplify scientific explanations
  - Put findings, especially controversial ones, in context
- Review presentation slides (if applicable)
- In-depth training conducted on a case-by-case basis
  - Depends on subject matter, complexity, potential for controversy (e.g., cell phones)
  - Essential for promoted talks and news briefings at big meetings (AAAS, APS)

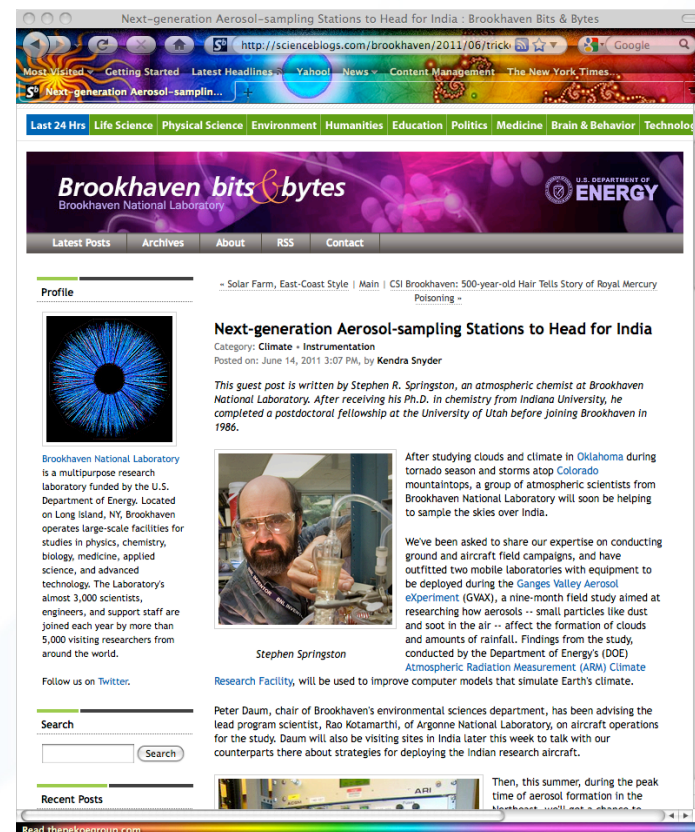
Cell phone ON





# Integrating with social media

- Rewriting select stories for posting on
  - Blogs (Brookhaven Bits & Bytes on ScienceBlogs/Quantum Diaries)
    - These blogs also feature original content
  - DOE Pulse
- Tweet (follow us @BrookhavenLab)
- Posting videos/animations on YouTube, photos on Flickr
- “Amplification” via DOE Office of Science website/blog



# Reporter relationships

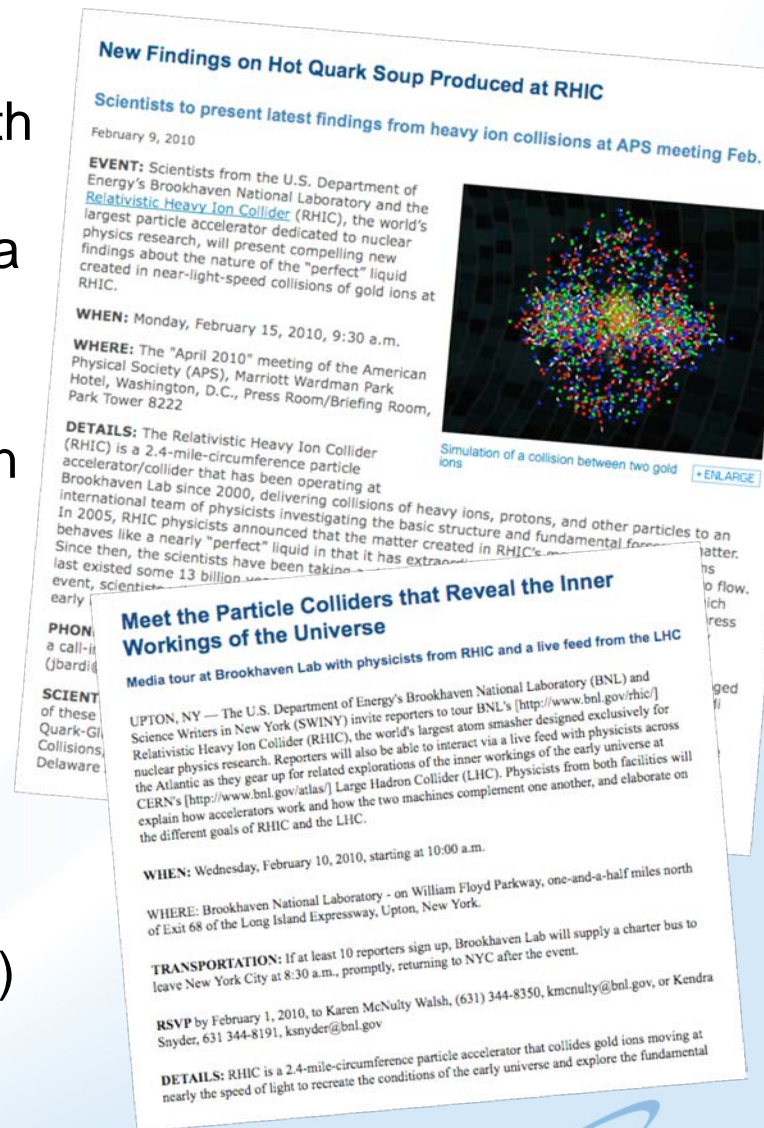
- Maintain active reporter lists and update regularly
- Proactive pitching and responding to media inquiries
  - Connecting reporters with scientists
  - Arranging TV crew visits (from last-minute local cable to National Geographic documentaries)
  - Sensitivity to deadlines
- Attend networking/workshop/conference events
  - AAAS, NASW, CASW, SWINY, ScienceOnline
- Host events at BNL and off site for science writers
  - SWINY tours, on- and off-site media roundtables
- Coordinate talks and news briefings at scientific meetings

The screenshot shows a web interface for managing reporter contacts. At the top, there's a navigation bar with links: Home, Resources, Email, EDC, EIC, and Institution List. The main heading is 'Contact Lists'. Below it, a sub-heading reads 'Modify Reporter Information'. The form is divided into three sections: 'Work Contact Information', 'Personal Contact Information', and 'List Settings'. The 'Work Contact Information' section includes fields for 'First Name' (filled with 'Kenneth'), 'Last Name' (filled with 'Chang'), 'Address Line 1', 'Address Line 2', 'City', 'State', 'Zip', and 'Country'. The 'Personal Contact Information' section includes 'Work Phone' (212-556-7271), 'Work Cell', 'Work Pager', 'Work Fax' (212-556-7306), and 'Work Email' (kchang@nytimes.com). The 'List Settings' section includes 'Publication/Agency' (New York) and 'Title' (Science Rep).



# Case study: APS Feb 2010 RHIC press conference

- Convened strategic planning meetings with RHIC communications team to hone messages, craft two news releases, media advisory, and animation script
  - Multiple meetings over several months
- Coordinated production of video animation
- Trained speakers, tweaked slides
- Coordinated news conference, media outreach with AIP PR staff
- Pitched event to reporters
- Planned linked RHIC tour for SWINY
- Connected reporters with speakers at meeting (in person, via e-mail, and phone)
- Coordinated follow-up interviews





# 2010 RHIC press conference — Results

- Top-tier media wrote in-depth, original stories; many used animation
  - *NYT, Newsweek, USA Today, Science, Nature*
  - 500+ stories in 40+ countries from *Reuters and Agence France-Presse (AFP)* pick up
- Stories/messages on target
  - most accurately explained findings; many discussed future RHIC research
  - Nearly all mentioned DOE; many quoted DOE Office of Science director
- Huge social media response
  - Thousands of blog posts/comments, (*HuffPost, DailyKos, and SlashDot*)
  - 160+ “re-tweets” of our Twitter feed, and 800+ tweets linking to stories
  - 100,000+ views of animation on YouTube
- Nearly 38,000 visits to BNL’s online newsroom — significant spike
- Positive external “peer-review” [analysis](#) of news coverage, strategy
- 2010 Bronze Anvil, 2011 Gold and Bronze Bulldogs



# Recent headlines

## Brookhaven Lab findings eye birth of the universe

Originally published: February 15, 2010 6:41 PM  
Updated: February 15, 2010 9:20 PM

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The New York Times

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SPECIAL ISSUE

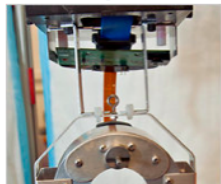
## A Scanner Suitable for Rats and Other Squirmlers

By SINDYA N. BHANOO  
Published: March 14, 2011

Researchers from the [Brookhaven National Laboratory](#) and [Stony Brook University](#) have built the first positron emission tomography (PET) scanner that is suitable for rats and other small rodents.

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A PET scan shows how the body's

tissue requires oxygen and glucose. A similar scan can be used to study the brain activity of a small animal, such as a rat. The Brookhaven National Laboratory and Stony Brook University have built the first positron emission tomography (PET) scanner that is suitable for rats and other small rodents.

THE WALL STREET JOURNAL  
WSJ.com

U.S. NEWS | FEBRUARY 23, 2011

## Brain Reacts to Cellphones

Study Finds Region Nearest Antenna Is More Active; Health Implications Unknown  
By SHIRLEY S. WANG

Cellphone use appears to increase brain activity in regions close to where the phone antenna is, according to a new study, but researchers said the implications for health are still unclear. The study is the first to demonstrate that radiation from the devices has a direct impact on the brain, likely to fuel a long-running debate over the safety of cellular phones.

"This study shows that the human brain is sensitive to electromagnetic radiation coming from cellphones," said Dr. Nora Volkow, an author on the study published Tuesday in the Journal of the American Medical Association. "It is something we need to face."



However, "our finding does not tell us if this is harmful or not," said Dr. Volkow, who is head of the National Institute on Drug Abuse.

Some medical experts have been concerned for years about the

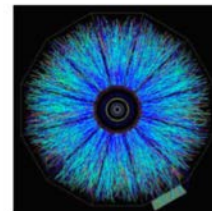
## SCIENTIFIC AMERICAN™

Permanent Address: <http://www.scientificamerican.com/article.cfm?id=antimatter-helium-4-rhic>

## Antimatter of Fact: Collider Generates Most Massive Antinucleus Yet

The Relativistic Heavy Ion Collider has produced several nuclei of the antimatter counterpart to helium 4  
By John Matson | Thursday, March 24, 2011 | 32

Most people know two things about helium. One is that it makes your voice comically high-pitched when you inhale it; the other is that it is extremely light, which is why balloons filled with the stuff float upward through the heavier air. But in particle physics terms—and especially when it comes to the nuclear physics of antimatter—helium is no lightweight. With two protons and two neutrons, ordinary helium is four times as massive as hydrogen, the lightest element. (Both hydrogen and helium have other stable isotopes—atomic varieties with differing masses—but



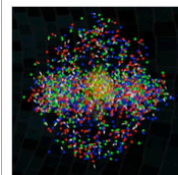
SHADOW DANCE: Within the shower of particles produced in collisions of gold ions, researchers have identified rare and fleeting antimatter helium 4 nuclei.  
Image: STAR Collaboration/BNL

## In Brookhaven Collider, Scientists Briefly Break a Law of Nature

By DENNIS OVERBYE  
Published: February 15, 2010

Physicists said Monday that they had whacked a tiny region of space with enough energy to briefly distort the laws of physics, providing the first laboratory demonstration of the kind of process that scientists suspect has shaped cosmic history.

Enlarge This Image



Brookhaven National Laboratory  
HOT A computer rendition of 4-trillion-degree Celsius quark-gluon plasma created in a demonstration of what scientists suspect shaped cosmic history.

The blow was delivered in the Relativistic Heavy Ion Collider, or RHIC, at the [Brookhaven National Laboratory](#) on Long Island, where, since 2000, physicists have been accelerating gold nuclei around a 2.4-mile underground ring to 99.995 percent the speed of light, colliding them and free their constituents. It has been a state-of-the-art which theorist a microsecond

The departure from the apparent ability of nature, known physics remain

This happened in bubbles smaller than the nucleus of an atom, which lasted only a billionth of a billionth of a second. But in these bubbles were "hints of profound physics," in the words of Steven Vigdor, associate director for nuclear and particle physics at Brookhaven. Very similar symmetry-breaking bubbles, at an earlier period in the universe, are believed to have been responsible for breaking the balance

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Picture of the day Space

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