Outreach Made Easy

Kandice Carter
Science Writer
Jefferson Lab Public Affairs

Jefferson Lab Mission

JLab's mission is to provide forefront scientific facilities, opportunities, and leadership essential for discovering the fundamental nature of nuclear matter, to partner with industry to apply its advanced technology, and to serve the nation and its communities through education and public outreach, all with uncompromising excellence in environment, health and safety.

(Source: Administrative Manual - Laboratory Overview101.01)

Outreach by Scientists

- AIP Summaries
- NSF Nuggets
- DNP web page
- CERN Courier
- Current Experiments
- Other

AIP Summaries

From: Physical Review Letters <prl@ridge.aps.org>
Date: July 12, 2005 10:16:19 AM EDT
To: dhbeck@uiuc.edu
Subject: Acceptance LF10512 Armstrong

Re: LF10512
Strange quark contributions to parity-violating asymmetries in the forward G0 electron-proton scattering experiment
By: D.S. Armstrong, J. Arvieux, R. Asaturyan, T. Averett, et al.

Dear Dr. Beck:

This manuscript has been accepted

...

PUBLICITY AND OUTREACH:

COVERAGE BY YOUR NEWS OFFICE: *** Please inform your institution's
public information or news office as soon as possible about this acceptance. *** The writers at your institution may want to publicize your work in their own publications or with the local media, and they need as much lead time as possible. To find the appropriate office, try searching for your institution's name at http://sciencesources.eurekalert.org or http://www.newswise.com/resources/ncd/.

COVERAGE BY APS AND AIP: Your research will be considered for Physics Today, Phys. Rev. Focus, and other APS and AIP publications--and could possibly be covered by newspapers and magazines worldwide--if you submit a summary

...

- Responding to the AIP's request is an easy way to conduct outreach.

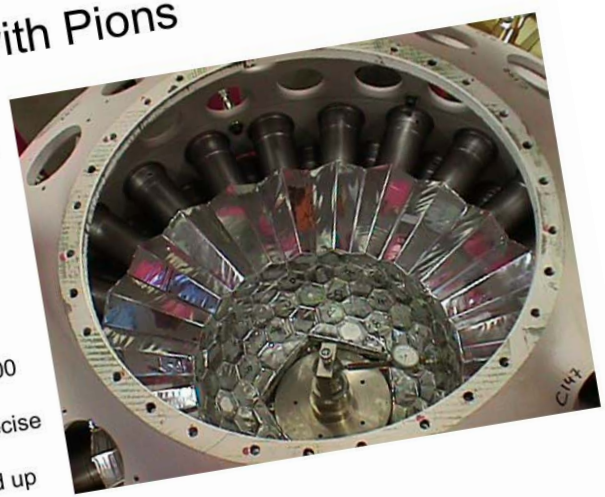
AIP Summaries

Participating Publications and Productions:

- *Physics Today* APS magazine for physicists
- *Physical Review Focus* APS web site and e-mail list for physicists, students, and journalists
- *Physics News Update* AIP web site and e-mail list for journalists
- Media Tip Sheet APS e-mail list for journalists
- Discoveries and Breakthroughs Inside Science AIP television spots for the public

NSF Nuggets

Precision Measurements with Pions

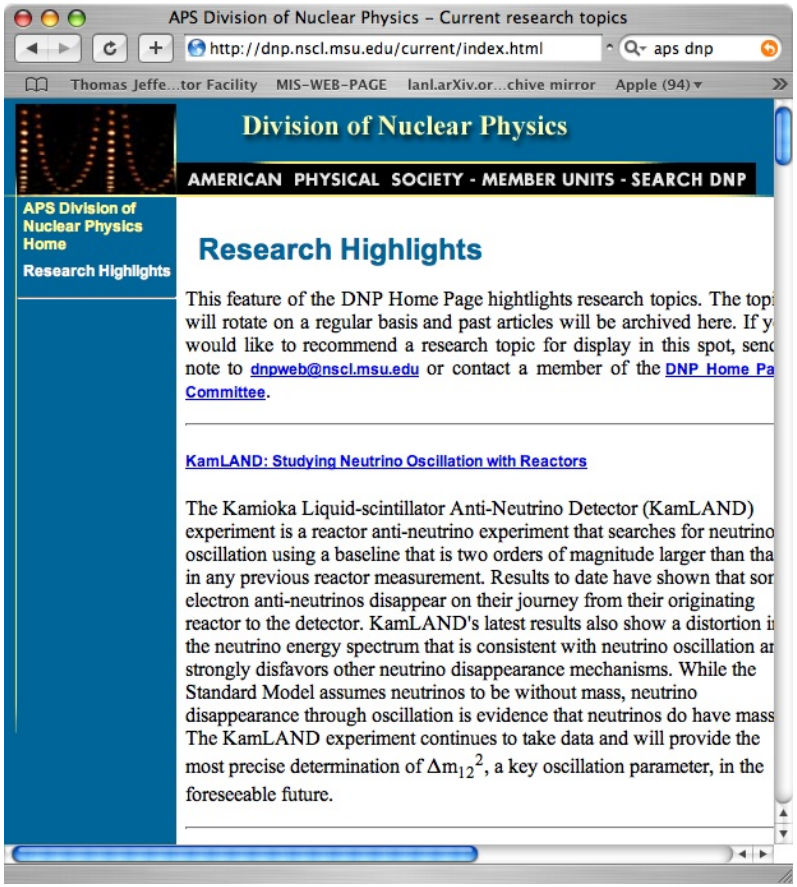


Pions are the lightest known bound state of matter, consisting of one quark and one anti-quark of the very lightest flavors, those called “up” and “down”. Pions exist in any of three possible electric charges, either positive or negative and also neutral, corresponding to three different combinations of “u”s, “anti-u”s, “d”s, and “anti-d”s.

Two experiments supported by the NSF Nuclear Physics program use pions as a laboratory for tests of fundamental symmetries of nature. The first, PIBETA at the Paul Scherrer Institute in Switzerland, is a precision measurement of a rare decay process that converts a charged pion into its neutral partner plus a positron and a neutrino. Approximately one pion in 100 million will decay in this way, and PIBETA has recently improved the determination of the decay rate by a factor of six. A deviation from the precise theoretical predictions would require new ideas beyond the presently conceived Standard Model of particle physics. This experiment is headed up by a group from the University of Virginia, with funds from the NSF Nuclear Physics program.

The other experiment, for which data taking at Jefferson Laboratory in Newport News, VA, has just been completed, will precisely determine the lifetime of the neutral pion (or “pi0”) using a technique called the Primakoff Effect, where a gamma ray produces the pi0 in the electric field of a nucleus. The quark and anti-quark in the produced pi0 annihilate each other and produce two gamma rays. This process takes place through the partial breaking of a fundamental symmetry of nature, providing a precise test of the theory of the strong force that binds the quark and anti-quark together. The two gamma rays are detected in an array of 1200 lead-tungstate crystals that produce visible light when a gamma ray passes through. The detector, called HYCAL, was constructed over the past five years with funds from an NSF MRI award. The collaboration includes several Historically Black Colleges and Universities in North Carolina and Virginia, as well as scientists from China, Russia, Ukraine, Armenia and Brazil. Undergraduate and graduate students from five different universities have been involved in the project throughout the construction phase.

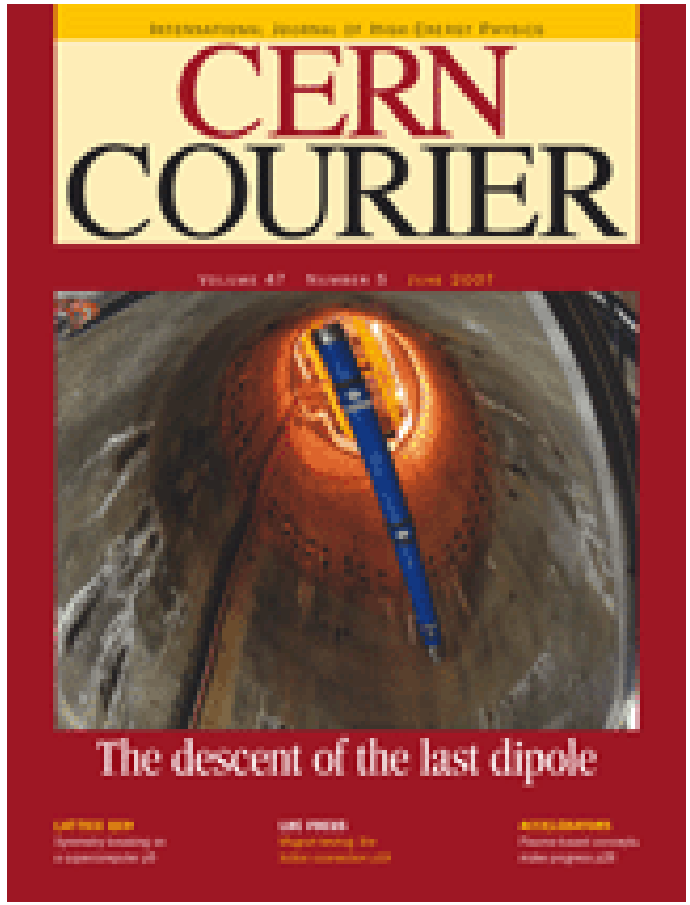
APS DNP Web Page



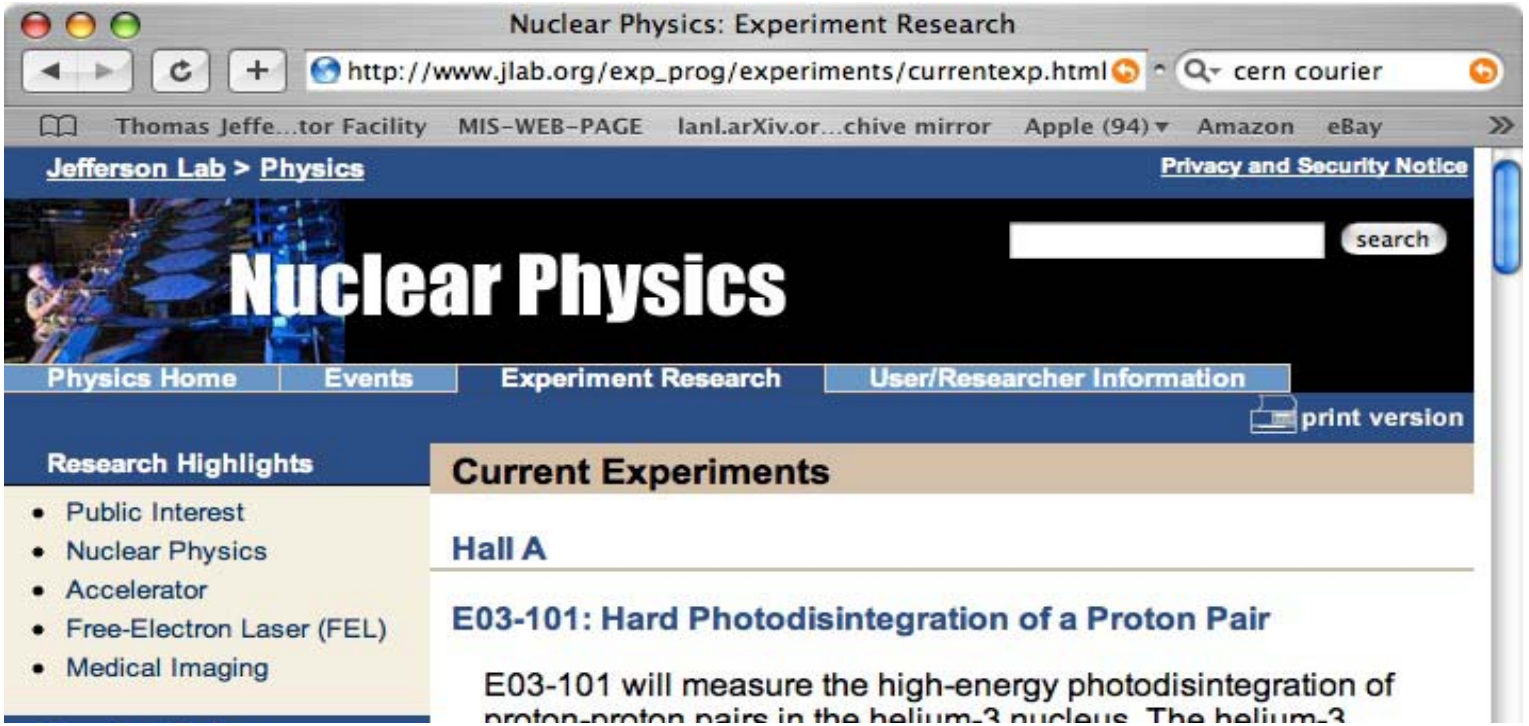
- All-call for “well written articles to highlight important current research topics in nuclear science for the DNP web page…”

CERN Courier

- News, feature and overview articles for the larger scientific community; also read by funders



Current Experiments

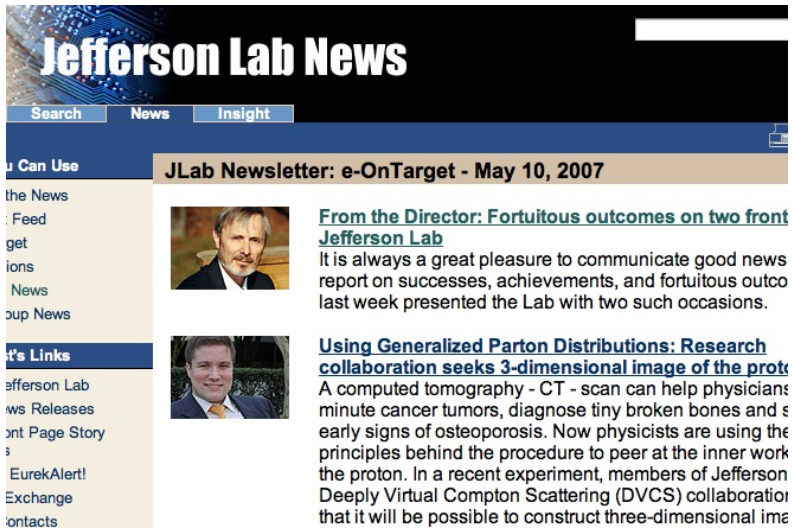


- Scientist-written, simple explanation of experiments (currently) running in each hall, linked off of the Jefferson Lab home page.

Other

- Scientific Conferences with press present
  - media training
  - news release or summary of result
- Jefferson Lab Research Highlights web page
- Posters/Public Talks/ Tours
- Etc…

What's in it for Public Affairs?



By getting the information early, we get what we need for:

- News Releases
- Web home page stories
- e-OnTarget Newsletter Stories
- outside pubs: symmetry, CERN Courier, ILC Newsline…

Need Help with Outreach?

Contact Public Affairs:

Science: Kandice Carter, Science Writer

General: Dean Golembeski, Public Affairs Manager

Newsletter: Debbie Magaldi, Public Affairs Specialist