

LNS NEWS

LAB. FOR NUCLEAR SCIENCE

M.I.T. CAMBRIDGE, MA.

November 19, 1985

Vol. 4 No. 5

LOGO CONTEST

We challenge you to design a logo for the Laboratory. We will award a \$50 prize to the winner. The judges are Bruce Bailey, Jean Hudson, Arthur Kerman, Gary Nixon and Bernie Wadsworth.

Submission rules:

1. You may submit as many logos as you wish. Your name and telephone extension should appear on a separate sheet. All participants will remain anonymous to the judges.
2. You must be an employee or graduate student of the Laboratory or Laboratory supported Physics Faculty.
3. All logo designs must be submitted to Jean Flanagan, LNS HQ, 26-505 no later than Friday, December 20th, 1985 at 5:00 pm.
4. The winner of the contest will be announced on Friday, January 11, 1986.

Thanks to Don Souza for designing the masterhead of the LNS News.

Let's have a little Harmony

We need musicians for an LNS/Physics IAP pick-up orchestra. If you're interested, please contact Jean Flanagan, 3-2361, Ed Kinney, 3-7065 or Kim Wainwright, 3-4841.

Louis Rosen Prize

Bates claimed its second Los Alamos Louis Rosen prize in the three years since its inception. Following the award to Steve Wood in 1983, Bill Burger received the 1985 prize. His thesis was Pion Absorption in ^{58}Ni at $T = 160 \text{ MeV}$ done under the supervision of Bob Redwine. Bill is now a postdoc at S.I.N.

Newsworthy

Treasury urges repeal of 401(K) plans

Congress is considering repealing in its entirety section 401(K) of the internal revenue code, concerning cash-or-deferred-income arrangements. The House Ways and Means Committee met in late September to mark up a tax reform proposal that would include the full repeal of section 401(K). The Treasury Department has advocated the repeal. To inform your senator or representative of your concerns about this proposal, write to him or her at the U.S. Senate, Washington, D.C. 20510 or the U.S. House of Representatives, Washington, D.C. 20515.

From Personnelite,
CUFA Newsletter

Charlie Blake wishes to thank all the people who sent him kind notes and cards when he was hospitalized.

Ingvar Blomqvist and Bill Donnelly have been appointed to the Program Advisory Committee for the 300 MeV linac at the University of Saskatchewan.

The fall running schedule, now underway, will be devoted to several experiments all using tritium as a target. This is a major program, currently involving much of the resources and personpower of the Bates Center. It is a collaborative effort among Carnegie-Mellon, MIT, NBS, University of Pittsburgh, University of Saskatchewan, University of Virginia, and Worcester Polytech.

October signals the end of another safe motorcycling season at the Linac. The trips this year were to: the Loudon Classic Road Race on Father's Day weekend and a 9 day 2500 mile tour of the Canadian Maritime Provinces. New England Dragway was the location of many enjoyable Wednesday nights. The final season results were:

- #1 Hamid Moazeni, 11.41 sec. @ 124.05 MPH, Mod. FJ1100
- #2 Ken Hatch, 11.588 sec. @ 117.00 MPH, Stock GS1150E
- #3 Dennis Boyden, 11.621 sec. @ 118 MPH, Stock GS1150E
13.624 sec. @ 95.06 MPH Mod. XL600R

Welcome back to Audrey Iarocci. Audrey has just returned from an exciting first trip to Hawaii.

New MIT Smoking Policy

The Institute recognizes the right of its employees to work in an environment that is relatively free of pollutants.

In the past few years, there has been mounting evidence to suggest that tobacco smoke, whether inhaled by a smoker or indirectly by a person in the general vicinity of a smoker, is harmful to the health of smoker and non-smoker.

In work situations where a non-smoker is made uncomfortable by a fellow worker's smoke, reasonable accommodation should be made to resolve the non-smoker's discomfort. It is hoped that such accommodation can be agreed to by those in the work location, with the help and guidance of the supervisor and, if necessary, the Personnel Office.

In work situations where, after reasonable accommodations have been made, the non-smokers are still suffering discomfort from

the effects of "passive smoke," it is Institute policy that the work area be declared a non-smoking area.

From memo, Joan Rice, MIT
Personnel Office
10/85

Frisch Symposium

Friday, October 25, 1985 was "David H. Frisch Day in Cambridge." Thus proclaimed the Hon. Francis Duehay, Mayor, following a banquet which capped a day-long symposium held to honor Prof. Frisch for his contributions to life at MIT, in Cambridge, and about the world.

Organized by his long-time colleagues Prof. Louis Osborne and Prof. Victor Weisskopf (who brought Dave to MIT nearly 40 years ago), and Loren Sompyrac, a former graduate student, this was a symposium, a reunion, and a celebration. It began informally on Thursday the 24th, and it's not clear when it was completely over, but the day of the symposium was itself altogether memorable.

With introductory remarks by (Prof.) Jerry Friedman, and the incomparable Viki Weisskopf (apropos of the inseparable nature of humor and life with Dave, he reminded us of Bohr's observation that "Some things are so serious that the only thing to do is joke about them."), we heard first from Dave's son Henry. A physicist at the U. of Chicago, he provided some delightful anecdotes about life growing up with Dad, and speculated on the question of whether the like-father-like-son physics connection was genetic or environmental. He also showed us results of one of the first proton-antiproton collisions at Fermilab which had occurred only a dozen days before.

Following this, the assembled colleagues and friends heard from a succession of former grad students starting with Dave's first doctoral student, all of whom were introduced by Lou Osborne, superb as master-of-ceremonies for the day and evening. Appearing to some extent in "chronological order" there were wonderfully diverse assortment of speakers. A view was offered, by Lyman Stinson who worked with Dave over an 8-year period. Also, during course of the day, we heard not only from practicing physicists, and from physicists-become-entrepreneurs and robotics researchers, for example, but also from a physicist-become cardiology researcher.

After the banquet dinner in the Walker dining room, the remaining speakers, including Mayor Duehay and, again, Viki Weisskopf (who added to our pleasure by playing some piano works of his beloved Mozart), enhanced the feeling generated throughout the day. This was what we were celebrating our great good fortune in knowing, Dave Frisch: this man of wisdom, humor, and humanity. We hoped that the charming seascape (by the 19th century American painter Eldred) which Lou Osborne presented to Dave and Rose which was chosen by them--will always remind them of this day-long out-pouring of warmth and gratitude.

- Bruce Bailey

William Weber Buechner, professor emeritus at the Massachusetts Institute of Technology, died on 12 March 1985 after a long illness.

Buechner was born in Vallejo, California in 1914 and received his BSc in 1935 and his Ph.D. in 1939, both from MIT. He worked with the late Robert J. Van de Graaff in the 1930s on the development of the first large Van de Graaff generator at the Round Hill Estate in South Dartmouth, Massachusetts. In 1937 this machine was moved to MIT, where it remained in service until 1951. It was moved in 1955 to Boston's Museum of Science, where it is now the centerpiece of lightning displays.

In the late 1930s, the goal of the Van de Graaff group was to study nuclear reactions and to construct precision equipment for this purpose. However, when World War II began, this work was set aside. The High Voltage Laboratory then, in an all-out effort, developed high-voltage x-ray generators for the US Navy. In 1942, Buechner was appointed associate director of the Laboratory, under Van de Graaff.

After the war, the Laboratory turned back to the work for which it was constructed, nuclear physics. Originally under Van de Graaff's directorship, and later under Buechner's, the Laboratory pioneered precision nuclear-energy-level measurements, using the Van de Graaff generator and the magnetic spectrometer. At the time, most nuclear-physics

laboratories favored the cyclotron, which could produce higher energies than the Van de Graaff generator. The tables began to turn, however, as physicists recognized the need for the precision measurements only the Van de Graaff could provide. The work coming from Buechner's group contributed in a substantial way to this change in attitude.

Buechner had a large number of scientific contracts around the world and he attracted a large number of people from foreign lands to the High Voltage Laboratory. These visitors were welcomed to the Lab and very gracefully received at Buechner's home in Arlington, where he and his wife, Christina, gave many parties. A large number of the foreign visitors -- and for that matter, American visitors -- went back to their home institutions and started new groups to study nuclear energy levels. Many of them also made repeat visits to the group at MIT.

Buechner was a true cosmopolitan, and so is Christina Buechner. They have traveled extensively: They spent three months in India, where Buechner followed a grueling schedule, giving talks in a new place almost every day. For work in Mexico, Buechner was given the title Professor Extraordinario for Life at the University of Mexico and, later, an honorary Ph.D. from the same institution. In academic processions at MIT he proudly wore his Mexican attire.

When the High Voltage Engineering Corporation was formed, originally for the purpose of developing tools for radiation therapy, Buechner was involved from the beginning as an advisor. As it turned out, other tools for radiation therapy became popular,

but the further development of the Van de Graaff generator at High Voltage and an enormous impact on nuclear physics. Buechner was a director of High Voltage from 1954 until his death.

When I think of Buechner the group leader, one characteristic stands out; enthusiasm. Many times I have walked into his office to discuss some idea, sound or not, and have always been received with enthusiasm. I think I speak for all who worked for him when I say that Buechner gave us room to run. When we produced a piece of work, it was ours; he only wanted to share the honor or the authorship if he had contributed directly.

Buechner was a superb teacher. There were no frills about his teaching. He was direct and concise and knew exactly how to present the matter to make it as easy as possible for the students to absorb it. He hated sloppiness, and his own work was a model in neatness.

Buechner was a member of the Committee on Nuclear Masses of the Union of Pure and Applied Physics. He was chairman of the physics department at MIT from 1961 to 1967. He retired from MIT in 1978.

with permission from Harald
A. Enge
Published in Oct. 1985
Physics Today

LNS Cooks

Just a reminder the LNS Cookbook will be coming out shortly so if you haven't submitted a recipe yet, please do so as soon as possible. This is a great way to give a little of yourself to others who are in need, especially during the holiday season. As you will remember from the last Newsletter, we will donate the money earned to a favorite

charity. Send your recipes to Donna Henderson, 26-505 by November 25, 1985. You can obtain a copy of the cookbook for giving or for yourself on December 5th.

- Donna Henderson

Newcomers:

Peter Bonneau is an electronics technician working in the Detector Group under the supervision of Jan Distelbrink. Peter was formerly at Data General.

Doug Warnock comes to Bates from Phase Systems. He is an electronics technician in the facility support group headed by Lyman Stinson.

Bates Seminars

The informal Friday lunchtime talks on medium energy physics will continue at Bates. Notices are sent to individuals and are posted.

IAP

The following is an alphabetical listing of the IAP activities for the Lab:

A Tour of the Bates Linear Accelerator Center, Leader, J. Flanz
Time and date to be announced

Bayreuth by the Charles: Wagner's Ring Cycle,
Organized by: E. Kinney

"Introduction to the 'Ring'", 2pm;
January 15.

"The Rhinegold", 7pm, January 15.

"The Valkyrie" Act I, 3pm; Acts II & III, 7pm, January 16.

"Siegfried" Act I, 3pm; Act II & III, 7pm, January 17.

"The Twilight of the Gods" Act I, 3pm; Acts II & III, 7pm, January 18.

Bicycle Commuting to M.I.T,
Leader: B. Bailey
Jan. 23, 12-1pm, 26-414

Bicycle Repair and Maintenance,
Leader: A. Edwards
Jan. 16, 1pm, 26-414

Computer Chess,
Leader: C. Horowitz
Jan. 9 & 16, 7pm, 24-034

International Tasting Party,
Leaders: D. Henderson, C. Murphy,
and G. Rodriguez
Jan. 24, 12-1:30pm, 26-414

Laboratory for Nuclear Science and
Physics Department Lecture Series

R. Ledoux, "Searching for a Quark-
Gluon Plasma" Jan. 8, 2:00pm, 8-
205;

R. Redwine, Title to be announced,
Jan. 10, 2:00pm, 4-145;

R. Yamamoto, Title to be
announced, Jan. 17, 2:00pm, 4-145.

J. Goldstone, "Super Strings - the
Theory of Everything???"
Jan. 21, 2:00pm, 4-149;

I. Pless, "Looking at the Stars
from Inside a Cave" Jan. 28,
2:00pm, 4-149;

J.-P. Revol, "The Demonstration of
the Megatek" Jan. 29, 2:00pm, 8-
205; and

Learning from the Past:

Prof. Emeritus V. Weisskopf,
"Reminiscences of Bohr and Pauli",
Jan. 10, 3:30pm;

Prof. Emeritus Bruno Rossi,
"Early Days of Cosmic Ray
Research", Jan. 17, 3:30pm;

Prof. Emeritus J. Zacharias,
"What We Didn't Do At Los Alamos",
Jan. 24, 3:30pm.

Let's Try Some Stitches,
Leader: M. Richardson
Jan. 10, 12noon, 26-569.

Lithuanian Culture,
Leader: M. Richardson
Jan. 23, 12noon, 6-321.

Living the American Civil War,
Leader: M. Kaletka
Jan. 28, 5:30-7:00pm, 26-414.

Measure, Countermeasure, Counter-
Countermeasure, Leader: F. Epling
Jan 28, 12noon, 26-414.

Niels Bohr Film Series, Leader: H.
Feshbach

"Open World" Jan. 14. 12noon,
"Remembering Niels Bohr"
Jan. 21, 12noon, E15-070.

So You're afraid of your
Microwave??
Leaders: D. Paul and D. Henderson
Jan. 27, 12-1:30pm, 26-414.

VAX Computing at LNS,
Leader: M. Kaletka
Jan. 8-15-22, 12:00-1:00pm, 26-414.

Greg Horlick, a chief accelerator
operator at Bates has resigned to
take a position with Data General.

Lecon de francaise

Is anyone interested in joining a
beginning French class? These
classes meet once a week during
lunch hours. The course is taught
by Berlitz teachers and the cost
of the course is covered by the
M.I.T. tuition assistance program.
If you are interested, please
contact Jean Flanagan 3-2361

Letters to the Editor

We invite you to say what you think. LNS is opening up a forum column of letters to the editor. The only criterion is that items discussed are LNS/MIT related. You don't need to sign letters and they will be held in strict confidence. Letters should be addressed to Jean Flanagan, 26-505.

Thanks to Bill Lobar for help in compiling and preparing the information and to Donna Henderson for help in wordprocessing and paste up for this newsletter.

Thanks for contributing news:

Dick Adams and
Ron Hoffmann