

The Village Voice



fermi national accelerator laboratory

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...Booster staffers are L-R: Q. Kerns, J. Garvey, G. Nicholls, M. May, R. Webber, D. Wolff, H. Gerzeveske, J. Lackey, G. Tool, S. Tawzer, K. Meisner, C. Hojvat, C. Ankenbrandt...

BOOSTER HITS 10 GeV

Fermilab's Booster group achieved a milestone in their quest for higher energy protons to feed the Main Ring when they raised the Booster energy from 8 GeV to a record 10 GeV during accelerator studies last week.

"Experimenters are not the only ones who want more energy," said Chuck Ankenbrandt, Booster group leader. "Accelerator performance benefits from the highest possible input beam energy. There are many advantages. High energy reduces beam losses caused by the mutual repulsion of the individual charged particles. Also, beam size shrinks as energy increases, allowing more protons in the available space."

Some formidable obstacles had to be overcome to make 10 GeV possible. Rol Johnson, former group leader, initiated the project last year. First, Quentin Kerns found ways to raise the RF voltage by 25%. Mike May and Lee Brown and his crew are carrying out these changes. Then, Gerry Tool, Dan Wolff, Gil Nicholls, and the Booster technicians under Jim Garvey were able to modify the Booster resonant circuit to provide the required 25% increase in magnet current.

During the test, Keith Meisner and Jim Lackey applied their long expertise in Booster tuning, while Stan Tawzer and his crew kept the RF stations running.

"The touchiest tuning," Ankenbrandt said, "was on the RF frequency program. The program tracks the proton's velocity throughout the acceleration cycle. This was extremely sensitive because the RF voltage available for this test was barely adequate.

"After a few hours, beam was coaxed through transition and past the point of maximum energy gain per turn. A mysterious loss developed near the end of the cycle, but was corrected by the proper RF frequency curve. Finally, more than 10^{12} 10-GeV protons per Booster cycle were extracted and sent to the dump."

According to Ankenbrandt, the test is "existence proof" that the Booster can produce 10 GeV beam without insurmountable surprises. Routine high-intensity operation at 10 GeV awaits the completion of RF and "10 GeV line" upgrades, he added. "Now if only we can raise the Booster input energy....," he concluded.

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EMERGENCY WARNING SYSTEM IMPROVED

In times of emergency other than fire, Central Laboratory personnel have been notified to evacuate the building by means of a portable siren sounded in the Atrium.

Tests have shown that in some areas of the building, and at out buildings, the siren cannot be heard. To insure adequate emergency notification, Site Services has installed 20 special emergency signal monitor/receivers: 18 in Central Laboratory; one each at Farm 38 warehouse and the Magnet Facility.

They will also be installed in the emergency shelter to advise of the "all-clear." Installation of CLB monitors was completed in October.

They are tested each Tuesday at 10:30 a.m., when outside warning sirens are normally tested. In an actual emergency, the floor wardens or Area Emergency Supervisor will implement local emergency plans as appropriate.



...D. Seifert (L) and F. Assell with warning device at Site 38...



...G. Plant (R), CL coordinator, shows warning device to floor wardens F. Gardner, D. Augustine...

E-95 ENDS RUN

On October 18, Experiment #95 -- A Fermilab/Johns Hopkins collaboration -- ended a four-year run of experiments in the Proton West experimental area. Experimenters in the collaboration hosted the traditional end-of-the-run party for their Fermilab associates.



...E-95'ers L-R are: B. Cox, T. Kondo, R. Baultrusitis, T. Murphy, M. Binkley, R. Miksa...

nucleons. The data analysis is not complete, but E. 95 hopes to shed light on the interactions of the constituents of the proton.

DENTAL INSURANCE SURVEY: REPLY NOW

Replies to an all-employee survey to determine interest in a dental insurance proposal were due Tuesday, Nov. 15. Please forward late responses to Ruth Christ, CL-6E, as soon as possible. As a point of information, Chuck Marofske, Acting Personnel Services Manager, announced that employees may join or drop out of the proposed plan at any time. For more information, contact Mrs. Christ at Ext. 3324.

E-95's experimentation with photons began in the fall of 1973 and was carried on for four years. During this time, the experimenters (Rosemary Baultrusitis, Morris Binkley, Brad Cox, Taka Kondo and C. Thornton Murphy of Fermilab and Matt Goodman, John Matthews, Les Ettlinger, John Nagy and Leon Madansky of Johns Hopkins) set up a double-arm lead-glass photo spectrometer and searched for direct photon and di-photon production arising from quark-antiquark interactions inside the protons. The preliminary results from this work indicate substantial differences with the results of the CERN ISR experiments on direct single photon production.

Recently, the group has begun the search for photon pairs produced by interactions of quarks, with anti-quarks in the interacting



...Above left, front row, are (L-R): Chien San-chiang, Deputy Sec.-Gen., Academy of Sciences; Fang Yi, Politburo member; Lee Teng; Teng Hsiao-ping, Vice-Premier; M. Teng; N. Teng; Wu You-Hsun, Vice-pres., Academy of Sciences; and Chang Wen-Yu, Director, Inst. for High Energy Physics of the Academy. Above right, Vice-Premier Teng Hsiao-ping (R) talks with Nancy and Lee Teng...

LEE TENG VISITS CHINA

After a 30-year absence, Fermilab's Dr. Lee Teng went back to visit his native China last month.

Teng, associate head for advanced projects (Accelerator Division), traveled to the People's Republic of China with his wife Nancy and son Michael, 10, on a month-long journey. After entering through Hong Kong, the Teng family flew directly to Peking, the national capital.

During 12 days in Peking, Teng met with leading scientists and was received by Vice-Premier Teng Hsiao-ping. Accelerator design/technology was discussed by the Fermilab physicist with Chinese physicists and engineers. The Chinese have placed construction of a particle accelerator high on the list of national priorities, Teng reported.

"Preliminary planning is being vigorously pursued," he said, "the only firm decision so far is that it shall be a proton accelerator for high energy physics research. Chinese accelerator theorists are very able and well informed, but lacking in experience," Teng said. Concluding from several visits to several heavy electrical machinery and electronics factories, he observed that Chinese industry is capable of meeting the challenge of the project "provided it is given the same national support as, for example, the space program."

His visit, Teng said, was facilitated by the desire of Chinese scientists to communicate with those of the U.S. and by the recent emphasis in China toward basic research and higher education.

Under the new education policy, candidates for universities will again be selected by academic excellence through entrance examinations, for the first time since the "Cultural Revolution." Beginning next year, programs for graduate studies will also be implemented by the Academy of Sciences.

During his stay in Peking, a photo of Teng meeting with Vice-chairman Teng (no relation) appeared on the front page of the People's Daily, official newspaper of the Chinese Communist Party. The publicity drew letters and visits from distant relatives scattered around China. After Peking, Teng and family continued on to Nanking for a reunion with brother, C.C. Teng, an advisor to the municipal government. While there, he also lectured in the Nanking University.

Shanghai's Nuclear Physics Institute was Teng's last stop for physics talks. After pleasure trips to Hangchow and Kweilin, the family returned to the U.S.

Delegations of Chinese scientists visited Fermilab during national tours in 1972. Fermilab Director R.R. Wilson and deputy Director Dr. E.L. Goldwasser visited China in 1974 and 1973.

Fermilab Science & Humanities Lecture Series Presents

"DOMINATION THROUGH MEDIA"

by Dr. Harvey L. Molotch

Friday, Dec. 2, 1977

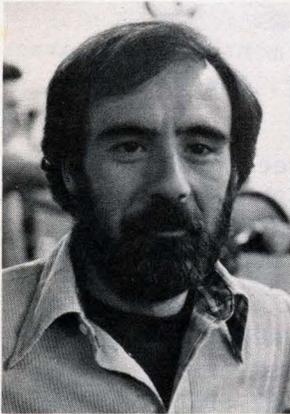
8:30 p.m.

Admission by Free Ticket

Mass media's impact on society will be examined in the fourth 1977-78 Fermilab Science and Humanities Lecture program. Dr. Harvey L. Molotch, associate sociology professor at the University of California-Santa Barbara, will speak.

Dr. Molotch earned Ph.D. and Master's degrees in sociology at the University of Chicago; the bachelor's degree in philosophy from the University of Michigan. Honors include a Ford Foundation "Urban Crisis" grant (1970). Before joining the Santa Barbara faculty, he taught at the State University of New York-Stony Brook, University of Chicago, University of Illinois-Chicago Circle campus and Indiana University at Gary.

After the lecture, the speaker will be guest of honor at an informal reception in the Central Laboratory cafeteria. Refreshments will be served. Admission will be free, but tickets will be required. Tickets may be reserved, but must be claimed by 5 p.m. Thursday, Dec. 1. To pick up or reserve tickets, contact the Guest Office, CL-1W or phone 840-3440.



...T. Prosapio...

TV SPECIAL SPOTLIGHTS FERMILAB EMPLOYEE

Tom Prosapio, a Proton crew chief, is one of two subjects of a television special entitled "Widows and Widowers: The Grieving Process." The program will air at 5 p.m. Saturday, Nov. 26, on WBBM-TV (Channel 2). The 30-minute presentation is a segment in "Channel 2: The People," a public service series that won an Emmy award this year. Prosapio, with his son Jeffrey, 11, and daughter Angela, 9, will be interviewed on film by narrator Harry Porterfield. Mrs. Donna Prosapio died in January after a two-year bout with Hodgkins' disease. A widow, also a surviving spouse raising a family, will share the program with Prosapio. He urges fellow Fermilab employees to view the program showing the grieving/family rebuilding process that many families are experiencing. A Bolingbrook resident, Prosapio was asked to appear on the program through membership in the Elmhurst chapter of Young Single Parents, a national group.

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EMPLOYEE NEWS NOTE

An update of the benefit handbook is in the works! The "Fermilab Employee Retirement Medical and Insurance Programs Handbook" will be distributed by January 1978.

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THANKSGIVING NOTICES

Laboratory offices will close Thursday and Friday, Nov. 24-25, in observance of the Thanksgiving holiday. Due to the holiday, the Village Crier will not publish Nov. 24. Regular publication will resume Dec. 1. Special cafeteria hours will also be observed Nov. 24-25. The cafeteria will be closed Thanksgiving; Friday, serving hours will be: breakfast, 8-10:30 a.m.; lunch (grill only), 11:30 a.m. - 1:30 p.m.; and dinner will not be served. Jo Baaske, payroll supervisor, reminds employees of holiday deadlines for submitting time sheets/leave usage sheets. Weekly timesheets are due in payroll Friday, Nov. 18, for the week ending Nov. 20; monthly leave usage sheets were due Monday, Nov. 14. Visiting hours will also be modified for the holiday. On weekends and holidays, visitors may tour the atrium lobby and 15th floor from 8 a.m. to 8 p.m. Children 12 and under must be accompanied by an adult.

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