

FERMINEWS

 Fermi National Accelerator Laboratory

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ACCELERATOR DIVISION ANNOUNCES REORGANIZATION

A reorganization of the Accelerator Division was announced recently by F. R. Huson, Accelerator Division Head.

The new plan divides the Division into three subdivisions: the 400 GeV Program, headed by Rolland Johnson; the Tevatron Program, which will continue to be headed by J. Richie Orr, and the Colliding Beams Program, provisionally headed by Donald E. Young. Young also continues in the post of Deputy Head of the Accelerator Division. Lee Teng is Associate Head.

According to Huson, the reorganization clarifies the three major missions of the Accelerator Division, which employs more than 300 people. The Division is now recruiting to fill 35 job openings.

Dr. Young will coordinate the activities of the Accelerator Division's support groups which have been expanded to include the Refrigeration group, headed by Jeff Appel, and the Instrumentation group, headed by Ed Higgins. Almost half of the Division's manpower is in the five support groups which also include Mechanical (Max Palmer, leader), Controls (headed by Mike Gormley) and Electronics/Electrical (led by Gerry Tool).

THE 400 GeV PROGRAM

Goals of the 400 GeV Program were outlined recently by Dr. Johnson at an all-experimenters' meeting. He said that the first goal will be the satisfaction of the high energy physics program. Increased reliability of operation, continued improvement in intensity levels, further development of beam splits and extraction modes, and plans for alternate operating modes, (including running at 450 GeV) will have the highest priorities.

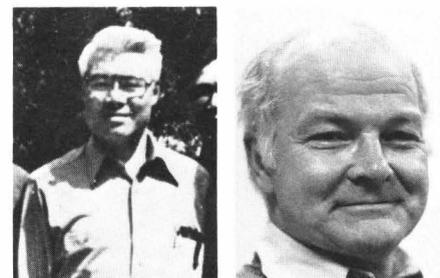
The 400 GeV program has five subdivisions: the Linac group, headed by Curt



F. R. Huson

R. Johnson

R. Orr



L. Teng

D. Young

Owen; the Booster group, headed by C. Ankenbrandt; the Main Ring group, Frank Turkot, leader; Roger Dixon's Switchyard group, and the Operations group led jointly by J. MacLachlan and Jeff Gannon.

THE TEVATRON PROGRAM

The Tevatron Program will build the 1,000 GeV superconducting accelerator, using magnets supplied by the Energy Doubler Magnet Division. The machine will be constructed from plans being developed by a design task force under the leadership of Helen Edwards.

A vigorous testing program will be carried out within the Main Ring tunnel, using beam from the Main Ring. A large systems test effort is being constructed in the B-12 awning area. The purpose of this facility is to make a full-scale test of as many of the Energy Doubler systems as possible, including a full-size satellite refrigerator, power supply system,

(Continued on Page 2)

control system, and vacuum system.

These efforts of the Tevatron group will be supported by personnel from the Accelerator Division's support groups and from the Research Division.

THE COLLIDING BEAMS PROGRAM

The longer-range goals in the physics program at Fermilab have been recognized by the activities in the Colliding Beams Program. The very exciting frontier to be explored at the high center-of-mass energies available by colliding beams in the Doubler accelerator, or with a counter-revolving beam in the present accelerator, must be actively pursued. The three main activities for the near future are:

(1) The development of the technique of cooling a beam of antiprotons by a super-cool high-powered electron beam or by a technique known as stochastic cooling, is underway in the cooling ring experiment west of the Fermilab Booster accelerator. If successful, a beam of antiprotons of sufficient intensity and quality would be available for acceleration and, ultimately, collisions in the Tevatron.

(2) A target station for producing antiprotons from 80 GeV protons from the Main Ring accelerator will be constructed.

(3) A study group has been brought together for the purpose of developing a detailed design for obtaining colliding beams which will be useful for high energy physics experiments.

Although the colliding beam activity will take a lower priority to the 400 GeV and Tevatron Programs in the allocation of Fermilab's valuable manpower resources, nevertheless, it is expected that substantial progress can be made on these important problems. A collaborative effort with the Lawrence Berkeley Laboratory, Argonne National Laboratory, and the University of Wisconsin is being negotiated to assist in the future development of this potential.

Another important goal of the Accelerator Division is the aggressive continuation of a strong program of accelerator research. More than 50 papers have been submitted by Fermilab staff members to the 1979 Particle Accelerator Conference to be held in San Francisco in March. Topics range from one end of the accelerator to the other; from

the highly-successful H source at the beginning, to very sophisticated superconducting technology to be used in the Tevatron, and the future development reflected in the cooling ring concepts.

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SOME FOLLOW-UP ON THE SWITCHYARD SUPER-CONDUCTING MAGNET TEST FROM ROGER DIXON

Last week we reported transporting beam intensities $>10^{12}$ through the Switchyard superconducting magnets on January 11.

On January 17, 1.8×10^{13} protons were transported through the magnets at a 400 GeV field. This was not an upper limit of beam intensity for the magnets, but the maximum intensity that could be delivered by the machine at that time.

These results suggest that it is very possible to build 400 GeV beam lines using the Energy Doubler dipoles and give us reason to be optimistic for the higher energies. Geometry changes are now being made to go to the higher fields.

People who made important contributions to the project and were not mentioned last week are: Fil Johnson, Kent Ernsting, Theo Gordon, Phil Gavin, and Terry Svedja, all of the mechanical support group.

R. Dixon

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PSYCHOLOGIST TO GIVE SIGMA XI LECTURE

Dr. Elizabeth Loftus, assistant professor of psychology at the University of Washington, Seattle, will discuss "Eyewitness Testimony" at the February 1 meeting of the Amoco Research Center Sigma Xi chapter, at the Amoco Research Center, Naperville. The lecture will be given at 8 p.m.

Dr. Loftus has written five books and over 50 scientific articles on the subject of human perception, memory, thinking, learning and eyewitness testimony. She has consulted in or testified at about 50 criminal trials as an expert on human perception and memory, the most recent case being a court martial in Korea.

Dr. Loftus received her Ph.D. in experimental psychology from Stanford University in 1970.

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STORM PUSHES FERMILAB INTO EMERGENCY STATUS



...Site Services crew at lunch break after the long week-end...L-R, seated: J. Kalina, A. Grubba, M. Becker, C. Chandler, R. Kraft. Standing, L-R: C. Winders, N. Trevino, D. Rodriguez, R. Lootens, V. Kerkman, R. Kujath, D. Shemanske, M. Garcia, R. Hall, D. Hanson...

A small army was mobilized at Fermilab to cope with the 26-inch snowfall that covered northern Illinois on the weekend of January 13. At midnight on Friday, Site Services' snow removal crews began a routine road clearance job. At 4 a.m. a message from the weather service brought a warning that another, bigger storm was on the way. Site Services then moved to an essentially-emergency status that stayed in effect for 48 hours.

Over 100 people were called in or remained at the end of their shifts to help with the emergency. For many, it was a weekend without sleep and with a continuous push to stay ahead of the weather.

Bob Hall's snow removers put all of their equipment into action, augmented by an outside subcontractor and his equipment. First, the 50 miles of roads, then clearing doorways and access to critical areas needed to keep the accelerator running. The Fire Department was kept clear. Dispatchers in the Central Laboratory Communications coordinated by radio. Three cafeteria people remained on duty providing food for workers. Emergency sleeping accommodations were set up in the Users Center in the Village.

Tom Blanchford of Vehicle Maintenance was regarded as the miracle man of the weekend as he repaired snow plows and trucks, getting them back on the road as quickly as possible. He started stalled cars, towed others.

When those who could came to work on Monday, the roads were open; the Laboratory was functioning. The Fermilab Village was



...Tom Blanchford...

still inundated and priority shifted to clearing two feet of snow from the roofs of the Village houses, shoveling sidewalks, plowing driveways, unearthing buried cars.

Looking back at the crisis successfully handled, thanks and accolades were passed in abundance.

The Accelerator Operations group added to the tributes: "During the entire storm the machine ran very well and almost constantly, with very little trouble.

"Our thanks go to those who plowed the roads, towed our cars and trucks, served food, and kept the heat on. Everyone seemed to put forth a lot of extra effort."

As Ferminews goes to press this week, the weather has struck again -- six inches of snow backed by high winds. Getting used to it??? NEVER!

FERMILAB
3RD ANNUAL
 BERTIE CROAKER - PITTSBURY
CHILI
 BAKE-OFF!

SATURDAY - JANUARY 27 - 7 P.M.
 USERS CENTER - FERMILAB VILLAGE
 Contestants register by January 24
 with Paul Brindza, Ext. 3354
 Bob Mau, Ext. 3721
 Sharon Lackey, Ext. 4453
 Tickets in advance: \$2.00
 at door: \$2.50
 (Tickets include beer, chili, munchies)

NALREC'S 1979

CANDLELIGHT BOWL

Saturday, February 10

Bowling Green Sports Center, West Chicago

9 p.m. - 1 a.m.

\$7.00 per person

Purchase tickets before Feb. 5



Committee selling tickets for Candlelight Bowl: (L-R) Brenda Moylan, Ext. 3648; Pat Yost, Ext. 3440; Jesse Guerra, Ext. 3533; Ed LaVallie, Ext. 3138. Also, Bruce Strauss, Ext. 3671.

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CONGRATULATIONS, BEST WISHES TO:

...DeWayne and Ronnie Hampton on the birth of their first daughter, Ronette Elizabeth Kiss, on Tuesday, January 9. Ronette weighed 8-3/4 lbs. when she was born. She joins two brothers in the Hampton family.

...Helen (Ecker) and Elden McCulloch, following their marriage on January 20. Helen is the Recreation Coordinator at Fermilab. Following a honeymoon in the Caribbean, the McCullochs will be at home in Carpentersville.

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COLSON AT ENERGY AWARENESS PROGRAM

John Colson, head of Fermilab Support Services, attended the Energy Awareness Program for federal employees, held at the Everett McKinley Dirksen Building, Chicago, on January 25.

The program, sponsored by the Chicago Federal Executive Board, was given in response to the President's directive that energy conservation awareness should be implemented by federal agencies.

Colson presented Fermilab's slide program and handed literature to the hundreds of employees and visitors at the federal building.

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NOON HOUR FILM SCHEDULE

WED., JAN. 31 - "Fermilab"

WED., FEB. 7 - "Key to the Universe"
Part I

WED., FEB. 14 - "Key to the Universe"
Part II

WED., FEB. 21 - "Shadows of Bliss"

WED., FEB. 28 - "Continuing Creation"

Films are shown in CURIA II at noon.

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