

FERMINES

 Fermi National Accelerator Laboratory

Operated by Universities Research Association Inc.
Under Contract with the United States Department of Energy

Vol. 3, No. 23

June 5, 1980

DEEPER LOOK AT MODERN TIMES URGED BY HISTORIAN WEINER

Dr. Charles Weiner urged historians of science not to "get so absorbed in the 30's, 40's and 50's that we miss the contemporary history of the 60's, 70's and 80's."

Professor of the history of science and technology with the School of Humanities and Social Science, Massachusetts Institute of Technology, Weiner was the speaker at the banquet that concluded the second day of the International Symposium on the History of Particle Physics. Already enough history has and is emerging in the 60's, 70's and 80's that those science historians who dwell too long with the earlier decades will find themselves hurrying to catch up. The final words of his talk before the question and answer session were: "Don't miss the beautiful opportunities before our eyes."

The powerful advantage of working in contemporary science history is that the scientists who molded the thinking of those decades are still alive and their views can be recorded, Weiner said.

He also said that many contemporary scientists want to get on with their work and push ahead for new findings. The agonies and setbacks they encountered along the way frequently are set aside, possibly forgotten, as they focus on and remember their successes. But to historians like himself, the obstacle-strewn pathways contain an abundance of memorable history.

Weiner admitted that too frequently scientists and historians of science do not understand each other and what their missions are as well as they should. Historians, from their own point of view, want to capture the creativity of the human spirit from as many sources as possible for the purpose of "illuminating this important and rich part of the human culture," Weiner said.

SYMPOSIUM SCENES



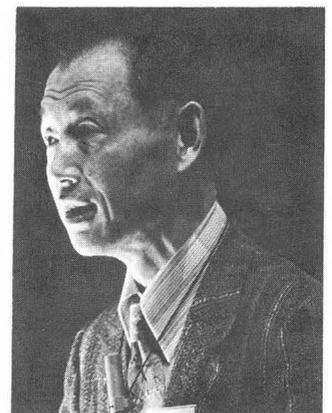
Robert Marshak (left) and P.A.M. Dirac.



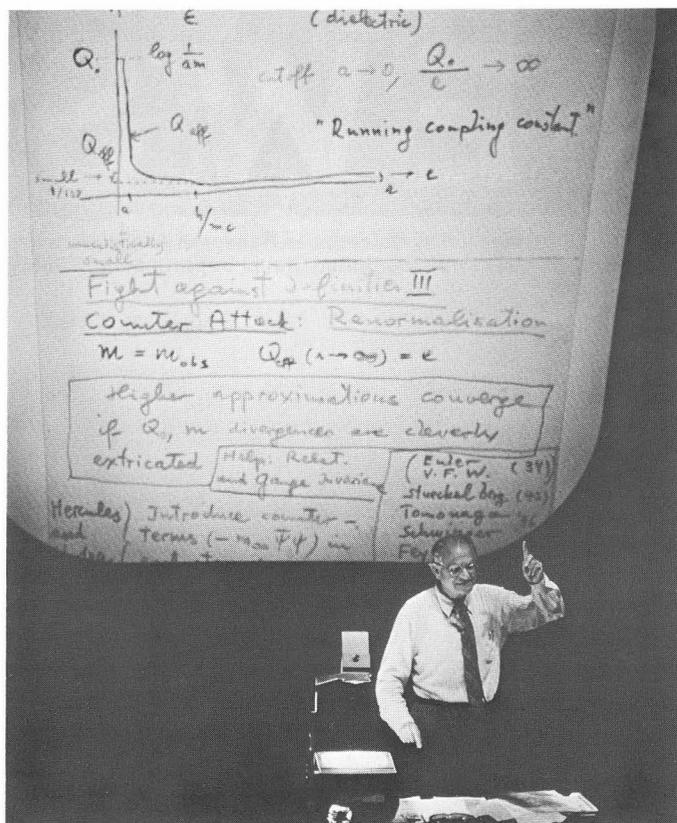
(L-R) Herb Anderson, Silvan Schweber, Victor Weisskopf, P.A.M. Dirac and Gilberto Bernardini at panel discussion.



Bruno Rossi



Satio Hayakawa



Victor Weisskopf at symposium.

IN THIS ISSUE

Leon Lederman has prepared answers to eight questions submitted to him by FERMINews, on the occasion of the end of his first year as Fermilab director. His comments are enclosed as a supplement to this issue of FERMINews.

In his review of the present and future position of the Laboratory and its role in high energy physics, Lederman assesses its strengths and weaknesses in terms of budget, manpower, experimental capabilities and support activities. He also addresses the potential impact of decisions by the Woods Hole Subpanel of the High Energy Physics Advisory Panel on Fermilab.

The director, although being realistic in his answers, carries an optimistic attitude throughout his assessment. He ends by saying that there is no doubt in his mind that the Laboratory and its employees should "feel virtuous about our quest for the comprehension of energy of matter."

Extra copies of Lederman's remarks are available in the Public Information Office, CL1-W, Ext. 3351.

FIGHT FOR SURVIVAL GOES DEEP

Even at the molecular level the fight for survival goes on, Dr. James F. Crow of the University of Wisconsin told his Physics Colloquium audience.

He described what he called a selfish or murdering chromosome that is able to communicate with another chromosome and cause it to commit suicide. The killer chromosome somehow instructs its companion chromosome that when it gets into a sperm, it (the chromosome) should not function. In that manner, the killer chromosome survives and the other one self-destructs, explained Crow. It's a form of competitive survival at the molecular level, he said.

Crow was the guest of the Fermilab Physics Colloquium Committee. He is a member of the National Academy of Sciences, was president of several national professional societies and was dean of the School of Medicine at Dartmouth University. He is widely known for his genetic research, primarily with one of his favorite organisms, the fruit fly.

In speaking about the evolution of whole individuals, particularly man, Crow said the "champion of evolution" is the human skull. "There must have been a great deal of selective pressure to enlarge the brain," he said.

Yet, while mammals--and of those, primates--seem to have evolved the most rapidly over time, there is no parallel at the molecular level, even though it would be expected, said Crow. In fact, at the level of proteins, DNA and nucleotides--the targets of molecular biology--the rules of survival and evolution are different than those observed for whole organisms, he added.

Molecular biology, a relatively new discipline, is maturing with its own abundance of mysteries, the researcher said. "One of the great mysteries of molecular biology is that we have a good 100 times more DNA than we know what to do with." Just why this is so is the subject of a variety of theories, none widely accepted yet.

Maybe this "junk DNA" is a repository for "extra dead genes," Crow speculated.

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17 PARTICIPATE IN SUMMER PHYSICS
PROGRAM FOR MINORITY STUDENTS

Seventeen young men and women, all of them undergraduate college students, are participating in the 1980 Summer Physics Program for minority students at Fermilab.

They will be here from early June through Aug. 15. Coordinating the program is James C. Davenport of Virginia State University.

The program now in its tenth year, has the primary objective of encouraging minority students to pursue careers in physics and related fields. While here, the students are assigned to work with scientists doing experiments, operating the accelerator or carrying out other scientific work in the Laboratory. The students were chosen by members of the Summer Program Committee, who also carefully determine each student's interest and match that interest to the work assignment.

Members of the committee include Richard Carrigan, Frank Cole, B. J. Holt, Penny Horak, Moyses Kuchnir, Charles Schmidt, Alan Wehman and Herman White. The Summer Physics Program is supported by the Fermilab Equal Employment Opportunity Office.

"Fermilab is proud of the success of this program over the years," said Lauta Price-Joyner, head of the EEO Office here. "Many of the participants continue with graduate work or begin employment in a related field upon completion of their bachelor's degree.

"Similar programs are offered at other institutions such as Brookhaven National Laboratory, Stanford Linear Accelerator Center and Bell Laboratories. The long-range success of our efforts will be determined by increasing numbers of minorities in scientific professions."

Participating in the program are: PHILIP ADDERLEY, senior, Morehouse College. He'll work with Jeff Gannon in the Energy Saver Division; THALIA BRACKETT, sophomore, Virginia State University-Marvin Warner in Architectural Services; THOMAS DAILEY, junior, Grambling State University-Peter McIntyre, Internal Target Group, Accelerator Division; ROBERTO DUNN, junior, University of Texas at El Paso-J. B. Stoffel, Research Services; PATRICK FRANKLIN, sophomore, Southern University-Peter McIntyre.

Also, LUCIAN GOODE JR., sophomore, Virginia State University-L. D. Howlett,

Neutrino Department. VAN W. LANE, sophomore, Alabama A & M University, Elliot Treadwell, Exp. 546. GARY LEBBY, junior, University of South Carolina-Peter Trower, Expt. 580. DARYL O. MARSHALL, junior, Mississippi Valley State University-L.D. Howlett; SALVADOR MUNOZ, senior, University of Texas at El Paso-Brad Cox and Robert Wagner, Physics Section; RENE PADILLA-DIEPPA, junior, University of Puerto Rico, Mayaguez campus-William Riches, Plant Maintenance; CARMELITA PRICE, sophomore, Illinois State University-Kurt Krempetz, Meson Department; CHARLES SMALL, junior, University of the District of Columbia-Eugene Fisk, Energy Saver Division.

Also, FERNANDO TANNEHILL, junior, Alabama A & M University-Finley Markley, Energy Saver Division; RUSSELL THOMAS, junior, Norfolk State University-Michael Gormley; BRIAN WELLS, sophomore, Virginia State University-Pat Rapp, Exp. 557; and ROBERT WOODSON, sophomore, Jackson State University-John Cumulat, Physics Section.

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NALREC PLANS BASEBALL TRIP

NALREC will sponsor its first baseball trip of the 1980 season June 27. Fans can watch the Chicago Cubs and the St. Louis Cardinals slug it out.

The bus will load at the north end of the Central Laboratory at 11:45 a.m. and will leave at noon. Since the trip will be made on a Friday, those who go will be using their vacation time and must have their supervisors' approval.

Tickets are \$9 for women and \$12 for men. They may be obtained from Nelson Sample, Ext. 3719, and Ed Justice, Ext. 4553.

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FILM ON VANPOOLING TO BE SHOWN

Interested in cutting your commuting costs?

A film on vanpooling tells how. It will be shown tomorrow (Friday) and June 9 continuously from 11:30 a.m. to 1:30 p.m. in Curia II, CL2-SW. The film lasts about 15 minutes.

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EMPLOYEES SHARE KNOWLEDGE

A number of employees at Fermilab cooperated with the Public Information Office in helping conduct tours and speaking about high energy physics and Fermilab, during May.

Larry Coulson spoke on radiation safety at Central DuPage Hospital, May 1; Rupert Crouch represented Fermilab at St. Petronille School's career day, May 12; Ralph Kramp told the Aurora Luncheon Optimists Club about Fermilab, May 22.

Helping with tours were Miguel Awaschalom, Bob Benson, Dave Carey, Ruth Christ, Jim Finks, Norman Gelfand, Tom Graff, Herman Haggerty, Ed Kessler, Phil Livdahl, Ernie Malamud, Rich Parry, Roger Rice, Ivan Rosenberg, Carmen Rotolo, Jay Schmidt, Frank Turkot and Jim Zagel.

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JAN GREGORY ELECTED PRESIDENT

Jan Gregory, personnel administrator with Fermilab, has been elected president of the Valley Personnel Association, an organization she has been with four years. Last year, she was vice president, and the year before that, program coordinator. She also is a member of the American Society for Personnel Administration. Jan has been with Fermilab for five years.

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CHEZ LEON MENUS

Tuesday, June 10 - 7:00 p.m. - \$8.00

Salad nicoise
Seafood kebabs
Safron rice
Citrus salad
Almond cheese cake

Wednesday, June 11 - 12:30 p.m. - \$4.50

Rhubarb soup
Fresh stuffed vegetables
Coupes villa d'este

Thursday, June 12 - 7:00 p.m. - \$8.00

Cucumbers stuffed w/ham & pickles
Paprika schnitzel
Zucchini w/dill sauce
Buttered noodles
Beets w/horseradish salad
Sacher torte

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CHOREOGRAPHER'S SHOWCASE UPCOMING MAJOR ATTRACTION

"A Chicago Choreographer's Showcase," the first of three summer showcase performances, will play at Fermilab June 28.

The performance will begin at 8:30 p.m. in the Central Laboratory auditorium. Tickets are available at the ticket sales desk at \$5 each. Reservations may be made by calling Ext. 3353.

The second showcase will be on Jazz and will feature three forms, traditional, swing and bee-bop. It has been scheduled for July 19. The final showcase will feature folk music. It will run Aug. 9.

Appearing in the choreographer's showcase will be the Chicago City Ballet under the direction of Maria Tallchief. The dancers will perform "Invitation to the Dance." Until this year, the company had performed as the Lyric Opera of Chicago. As an independent company, they now fill the void that had existed in Chicago in classical ballet.

The Joel Hall Dancers' program ranges from modern to jazz balletic dance. They will perform "Farfella," choreographed by Warren Convert of the American Ballet Theater, and Ruth Page's "Chain of Fools."

Pascual Olivera and Angela del Morel will dance three selections. These are the "Fire Dance" from "El Amor Brujo de Falla," a Flamenco dance and a Spanish folk dance. Both have danced as principals with leading Spanish companies, Olivera with Jose Greco and Morel with Antonio and with the National Festival of Spain.

The Hubbard Street Dance Company will give its interpretation of a series of jazz pieces set to the music of George Gershwin and choreographed by their director, Lou Conte.

Kenneth Brelfoard and Judith Joseph began their careers with Ballet Guild showcases. They now head their own dance company. Although trained in the classical tradition, they will perform here in a satire of the form.

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