

F E R M I N E W S I

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A U.S. DEPARTMENT OF ENERGY LABORATORY



Robert Rathbun Wilson, 1914 - 2000 **2**

Fermilab Photo

Volume 23
Friday, January 28, 2000
Number 2

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Robert Rathbun Wilson

FERMILAB'S FOUNDING DIRECTOR DIES AT 85



Robert Rathbun Wilson
1914 ~ 2000

COVER: Robert Rathbun Wilson, Fermilab's founding director, wielding a shovel at the groundbreaking for the Main Ring in 1969.

by Mike Perricone

Robert Rathbun Wilson, a Wyoming cowboy who built the world's highest-energy particle accelerator laboratory with the eye of an artist, the shrewdness of a banker and the conscience of a human rights activist, died late on Sunday night, January 16, 2000, at a retirement home in Ithaca, New York, near Cornell University, after a long illness. He was 85.



Robert Wilson in 1971.

Wilson was not only a pioneering scientist, but a powerful spokesman for science. He reached a height of eloquence in his testimony before the Congressional Joint Committee on Atomic Energy in 1969. He was asked by Rhode Island Senator John Pastore about the value of high-energy physics research in the support of national defense.

"It has nothing to do directly with defending our country, except to make it worth defending," Wilson said.

Wilson—physicist, artist, sculptor, writer—put his personal stamp on every aspect of Fermilab (originally the National Accelerator Laboratory). He had the laboratory's buildings painted in bright primary colors. He patterned his design for the laboratory's twin-tower headquarters, 16-story Wilson Hall, after a cathedral in Beauvais, France. He established a herd of American bison at the laboratory, obtaining the first animals for the herd from Wyoming as a symbol of the laboratory's work at the frontiers of physics. Wilson had been born in Frontier, Wyoming, on March 4, 1914.

"Robert Wilson gave our laboratory the distinctive character it possesses today," said Michael Witherell, who was named Fermilab's fourth director in March 1999. "We inherit from him the tradition of building large and powerful accelerators that open up new ways of exploring the fundamental nature of the universe. In addition, he planned and designed Fermilab's striking physical campus, from the restored prairie to the remarkable architecture, including several of his own sculptures. He had a vision of the laboratory as a cultural, recreational and educational center for the surrounding community as well as a global research center open to the international community of scientists. He had a profound and unshakable commitment to human rights. Bob Wilson's legacy survives at Fermilab, in the surrounding communities, and in the world of science."

Cowboy, artist, sculptor, and physicist,

he molded all aspects of the Laboratory from **accelerators** to American **bison**



Fermilab Photos

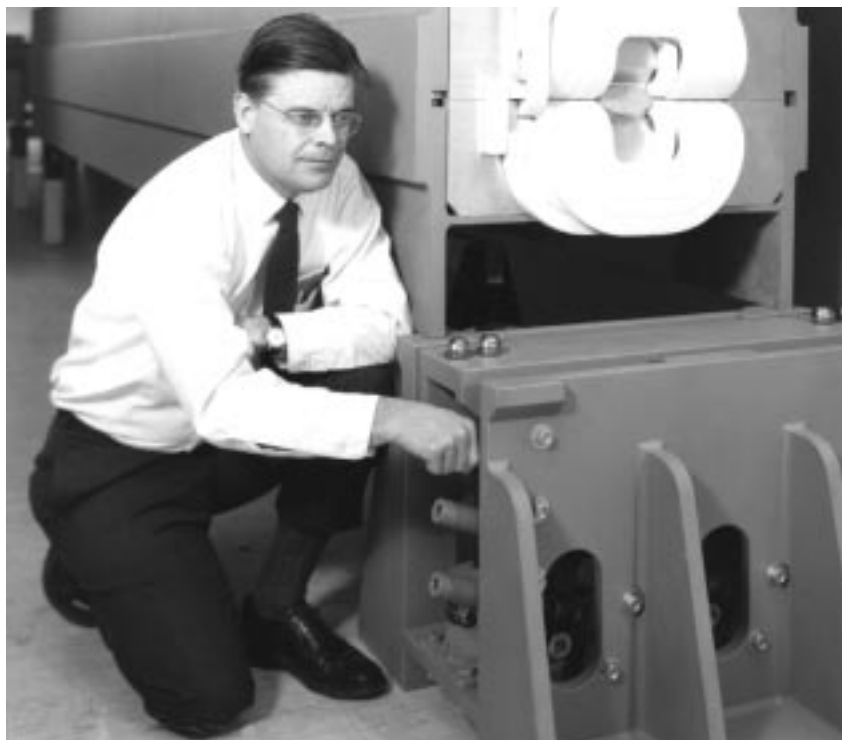
Wilson (right) at the helm in the main control room with deputy director Ned Goldwasser in 1971.

U.S. Department of Energy Secretary Bill Richardson said Wilson had “an unerring sense of what is important to the science of high-energy physics and its importance to the nation...He was a fearless optimist, believing that even the most difficult things could be accomplished. The nation has lost one of its best in Bob Wilson.”

Leon Lederman, 1988 Nobel Laureate in Physics, succeeded Wilson as Fermilab’s director in 1978, with dual inspirations: Wilson’s example as leader, and Wilson’s threats to haunt him if he should take

the job but then proceed to “screw up the architecture.”

“His spirit invades every corner of this great laboratory,” Lederman said. “He speaks to us through the surfaces of precast, through the prairie restoration, through the style of openness, through the flags that grace the entry. Today, the words we conjure up of the Wilson legacy are: Passion, Love, Exuberance, Showmanship, Imagination, Stubbornness, the Whole Man.”



Bob Wilson views a magnet model at the Lab's Oak Brook offices, before the move to the Batavia site.

CHANGING THE GAME

In the mid-1960s, the U.S. Atomic Energy Commission conducted an intense search for the site of a new National Accelerator Laboratory, settling in late 1966 on the town of Weston, 30 miles west of Chicago. Wilson was appointed director of the laboratory on March 1, 1967, serving until 1978, and high-energy physics research changed forever.

"Bob Wilson revolutionized the whole accelerator game," said physicist Timothy Toohig, of the U.S. Department of Energy, a longtime colleague of Wilson's. "Accelerators had been built by experts, in something resembling a closed craft guild. But with Bob, building accelerators became a science. He taught us to build a machine to be modified with the ongoing developments of science, always looking ahead. He didn't build in everything, but he didn't build things out, either."

Wilson had been a young leader on the Manhattan Project to build the first atomic bomb during World War II. Wilson adapted the model of that wartime partnership combining government resources and academic scientists, to the peacetime pursuit of civilian science, in particular to the construction of

large particle accelerators for high-energy physics. Fermilab accelerators have produced two of the major discoveries in particle physics: the bottom quark, in 1977; and the top quark, in 1995.

At Fermilab, Wilson incorporated his concept of "cascaded" accelerators, moving accelerated particles from one machine to another at increasing energies. But he made a major social impact before any of the lab's major facilities was completed, addressing the issue of racial unrest that was inflaming the country in 1968. Wilson and his immediate staff drafted a policy on human rights that was posted throughout the laboratory and is still in effect today.

"Prejudice has no place in the pursuit of knowledge," Wilson wrote. "In any conflict between technical expediency and human rights, we shall stand firmly on the side of human rights. Our support of the rights of the members of minority groups in our Laboratory and its environs is inextricably intertwined with our goal of creating a new center of technical and scientific excellence."

Illinois Senator Charles Percy read a statement into the Congressional Record in May, 1971 citing Wilson's efforts on behalf of "underprivileged people," including the hiring and training of members of minorities, and the insistence that subcontractors do the same; his environmental consciousness in the site's prairie restoration; his concern for esthetics in the site's architecture; and his "introduction of humanistic qualities into what otherwise might have been a bland, gray laboratory."

Percy also noted that Wilson had completed the Laboratory's first major construction project, the Main Ring accelerator, on time, at twice the energy level promised (400 GeV, or billion electron volts, instead of 200 GeV) and with \$10 million left over. Percy said Wilson was not only an accomplished and creative physicist, but "an innovative, sensitive, budget-minded administrator for a major research center."

“The important thing about Bob is that he was our conscience.”

~ Victor Weisskopf

MAN OF CONSCIENCE

Wilson “the Whole Man,” as Lederman described him, also left his mark with yet another quality.

“The important thing about Bob is that he was our conscience,” said physicist Victor Weisskopf, who worked with Wilson on the Manhattan Project.

Wilson was the son of Platt Wilson and Edith Rathbun Wilson. His parents separated when he was eight years old, and Wilson’s grandmother was responsible for most of his upbringing. In Woodstock, Illinois, he attended the Todd School (“That was the school Orson Welles went to. He was their great success,” Wilson recalled). He then attended several schools in Wyoming, Colorado and California, before reaching the University of California at Berkeley in 1932 to study electrical engineering. He chanced onto the university’s Radiation Laboratory, became fascinated with nuclear physics, and began research with the pioneering accelerator-builder E.O. Lawrence.

Wilson married Jane Ynez Scheyer in August, 1940, and moved on to Princeton as an instructor in physics. In his research between 1941 and 1943, Wilson developed the Isotron, a method of separating uranium isotopes that brought him wide attention: separating isotopes was a key element in the efforts to demonstrate a controlled nuclear reaction, on the path to building an atomic bomb.

Another method, developed by Lawrence, was adapted for the project, but Wilson was invited to join the Los Alamos group, working closely with J. Robert Oppenheimer and Enrico Fermi. Wilson was in charge of running the cyclotron accelerator, and making measurements pertaining to the critical mass required for a nuclear reaction. When the first atomic bomb was tested in the New Mexico desert, he was in charge of the nuclear measurements.

The product of a strong Quaker heritage, with its emphasis on non-violence, Wilson had wrestled with his conscience over becoming part of the war effort. He decided: “...if ever the forces of darkness could be said to be lined up against the forces of light, it was at that time.”

But in 1945, after witnessing that first atomic test, Wilson was affected to his core. In “Surely You’re Joking, Mr. Feynman,” Richard Feynman, the 1965 Nobel Laureate who worked with Wilson at Los Alamos, wrote that in the midst of the widespread celebrating at the successful test, “one man, I remember, Bob Wilson, was just sitting there moping.” When Feynman asked why he was moping, Wilson said: “It’s a terrible thing that we made.”

Wilson later wrote: “I determined at that moment that having played even a small role in bringing it about, I would go all out in helping to make it become a positive factor for humanity.” He helped organize the Association of Los Alamos Scientists, and helped enlist scientists from other labs into a Federation of American Scientists. He felt that the efforts of the Federation and other scientists helped bring about civilian control of nuclear energy.

After World War II, Wilson became a professor of physics at Cornell University. For the next 20 years, he worked at building larger and larger particle accelerators there, leading up to his appointment as director for the National Accelerator Laboratory. He was a member of the American Physical Society, the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society. He was the author

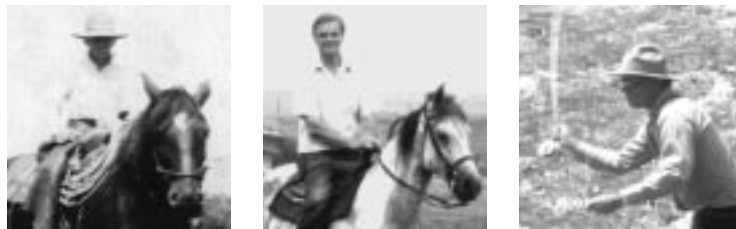


Wilson receives the Medal of Science from President Nixon in 1973.

Fermilab Photos

Robert Rathbun Wilson

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Fermilab Photos

A lifelong outdoorsman, Wilson shows his ease in the saddle as a youngster (left) and as lab director (center), and demonstrates his fly-fishing technique on a trip back to Wyoming in 1972.

of many research and scholarly articles, and served on the editorial board of *Daedalus* magazine. He won the National Medal of Science and the Enrico Fermi Award, among many other prestigious scientific prizes. Following his tenure as director of Fermilab, he taught at the University of Chicago, Columbia University and Cornell University, where he was professor emeritus of physics. He also was a guest lecturer at many universities and scientific institutions. He continued his contributions to Fermilab as an architectural consultant, and as a member of the Board of Overseers of Universities Research Association, Inc., which operates Fermilab under contract to the Department of Energy.

Wilson is survived by his wife of 59 years, Jane Ynez (Scheyer) Wilson; by three sons, Jonathan of Columbus, Indiana, Daniel of Indianapolis, Indiana, and Rand of Boston, Massachusetts; by a sister, Mary Jane Greenhill of Palos Verdes Estates, California; and by four grandchildren. Plans are being formed for a memorial service at Fermilab in the spring.

Wilson's daily routine as director of the Laboratory often began with a horseback ride on the 6,800-acre site, harking back to his formative years on a Wyoming cattle ranch.

"The idea that you could ride a hundred miles, and then ride another hundred miles, was very strong," he once recalled. "The sky was a big sky there." 🌤️



Photo by Reidar Hahn

Photo by Reidar Hahn

Wilson at his 80th birthday celebration at Fermilab in 1994.

The Sculpture of Robert Wilson

Photos by Reidar Hahn



The Wilson-designed 32-foot Hyperbolic Obelisk in front of Wilson Hall is called *Acqua Alle Funi*, or "Water to the Ropes." When an Egyptian obelisk was being erected by pulleys in the square of St. Peter's Cathedral in Rome, it threatened to topple until the order was given to pour water onto the ropes, stiffening the ropes and rescuing the effort.



Broken Symmetry towers 50 feet above the Lab's west entrance. Wilson designed the 212-ton (42,000-pound) structure, which was built in the Lab's machine shop. Some of the steel came from the decommissioned *USS Princeton*.



It took a lot of persuading, but Wilson finally convinced Commonwealth Edison to construct power poles to his own design specification based on the Greek letter "pi."



Growing up on a Wyoming cattle ranch, Bob Wilson was no stranger to working in the blacksmith's shop. He did the welding himself for the Mobius Strip, mounted atop Ramsey Auditorium. Wilson welded 3"x5" pieces of stainless steel to a tubular form eight feet in diameter.



Tractricious, 36 feet high, was designed by Wilson with structural design accomplished by Tom Nicol of Fermilab's Technical Support section. Each stainless steel outer tube weighs 550 pounds, and the structure can withstand 80-mph winds.

Robert Rathbun

WILSON HALL



Robert Rathbun Wilson
1914 ~ 2000

by Judy Jackson

In a January 17 obituary for Robert Wilson, the New York Times published a photograph of Wilson Hall at dusk. It was a fitting image to sum up the life of the extraordinary man whose vision and energy brought a revolutionary approach not only to particle accelerators but to nearly every aspect of the laboratory he built on the cornfields of Illinois.

From the beginning, Wilson was determined that the National Accelerator Laboratory would look beautiful.

"It seemed to me," he wrote, "that the conditions of its being a beautiful laboratory were the same conditions as its being a successful laboratory. It had to look understood."

In the 1968 Richtmyer Memorial Lecture, Wilson described his thinking about the architecture he wanted for the new physics laboratory:

"There is another feature of the project that we have decided to be aggressive about—the site. It has been described as just plain old cornfield. This accusation is not wholly unjustified; it is a bit on the flat side. However, the accelerator involves a ring one and a quarter miles in diameter as well as a number of support buildings and so forth...By gathering most of our support buildings together to make a truly high tower, and by the dramatic use of cooling water, they can make of Weston [former name of the site] an architecturally significant center, a place to which physicists will be attracted by the physical beauty as well as by the beautiful facilities for research in particle physics."

In the Fermilab Annual Report for 1987, Wilson reflected on the methods and criteria he had used to develop the plan for his building.

"My own sentiment was to have just one big building located at the injection and ejection point on the Main Ring... I hated the clutter and bad communication that result from having a multitude of small buildings. To decide how high the 'Lab' building ought to be I went up in a helicopter and had the pilot hover at various altitudes as I plotted an 'aesthetic factor' as a function of height. The curve rose sharply to about 75 feet, where it began to flatten as the Fox River Valley came into view. The sky, the sunsets, the Illinois landscape all looked better at the higher level... I concluded that the building should be at least 200 feet tall, and taller if possible."

It turned out to be 239 feet.

Wilson articulated a vision for a central laboratory building that would encourage the creative exchange of ideas among scientists and that would serve as a visual as well as a functional focal point. He wanted a building





Wilson Hall and the herd of American bison are bigger-than-life symbols of Bob Wilson's legacy.

“ SCIENCE,
TECHNOLOGY
&
ART
are importantly
connected ”

that would embody his belief that “science, technology and art are importantly connected,” and one that would signal the significance of the work taking place at the site.

Finally, Wilson wanted the building to be cheap. He was troubled by the oft-quoted dictum that AEC (the Atomic Energy Commission preceded the Department of Energy as the funding agency for Fermilab) buildings didn’t have to be cheap, they just had to look cheap. He was hoping for an opposite result.

In 1968, the laboratory held a design competition for the Central Laboratory Building. Wilson chose a design in the form of a truncated cone with a domed atrium. Under the hand and eye of architect Alan Rider of the firm Daniel, Mann, Johnson & Mendenhall, the winning cone eventually metamorphosed into the final design for Wilson Hall. The Laboratory broke ground in 1971, and the building was finished in 1974.

The resulting building expressed Wilson’s vision, perhaps even beyond what he had hoped. It became Wilson Hall, the High Rise—a symbol, a landmark, a home for a great laboratory. It has become such a recognizable symbol of Fermilab that its famous silhouette is a registered trademark of the Department of Energy.

But the story of Wilson Hall did not end there. Inside its uniquely textured concrete mass, problems soon developed.

As early as the summer after the building’s dedication, loose concrete began to appear, and throughout the 1970s, occupants observed sudden cracks and spalling, or crumbling, concrete. Throughout the early 1980s, sporadic spalling occurred at the west joints of the floors with the tower. In 1993, a piece of concrete from the fifteenth floor on the south side of the building crashed through the sloped glass of the cafeteria. No one who was drinking coffee in the cafeteria at the time is likely to forget the moment.

The cause of these disturbing events lay in the nature and material of the building itself. Post-tensioned concrete crossover floors join the building’s two towers together. As they change shape in response to seasonal temperatures, the two towers “want” to move slightly, independently of each other. However, friction between the concrete surfaces of the crossover beams and their seats restricts this movement. When the tensile forces become great enough, cracks develop in the structural elements, and the joints deteriorate where the crossover floors meet the west tower.



Photos by Reidar Hahn

For Wilson Hall to survive, these joints must be repaired.

The work has now begun that will restore Wilson Hall to health. Like the great cathedrals of Europe that inspired it, Wilson Hall will be under repair for many months. It will continue to function as the central laboratory building, but as the repairs proceed, floor by floor, an elaborately choreographed program of shoring, repairing and restoring will move successive groups of occupants in and out and back in again. The choreographer for this \$18.8 million production, which also

includes a plumbing overhaul and window replacement, is Fermilab engineer Elaine McCluskey (whose young daughter once remarked that Wilson Hall looked to her like “a big Barbie dress.”)

At the completion of construction in the fall of 2001, Wilson Hall will have a sound structure, new windows, modern plumbing and a new front entrance. After nearly 30 years of shared triumphs and trials, Fermilab and Wilson Hall should be ready to face a new era of discovery together. 🌱

“ Some Words of WILSON



Robert Rathbun Wilson
1914 ~ 2000



Fermilab Photo

Furnishings are far from elaborate as Wilson addresses Lab staff in 1968.

by Mike Perricone

Bob Wilson, writer and speaker, was a good match for Bob Wilson, scientist and innovator.

“He was very exciting,” said John Peoples Jr., Fermilab’s third director (1989-1999) and a Wilson colleague from the earliest days of the Lab.

“He had a remarkable vision of what he wanted, and a romantic and noble way to communicate that to people.”

Here are excerpts from his writings, and from his notable appearance before the Congressional Joint Committee on Atomic Energy in 1969. All contribute to a picture of what Wilson’s successor as director, Leon Lederman, described as “Wilson, the Whole Man.”

THE EXCHANGE WITH SENATOR JOHN PASTORE

Pastore: Is there anything connected in the hopes of this accelerator that in any way involves the security of the country?

Wilson: No, sir; I do not believe so.

Pastore: Nothing at all?

Wilson: Nothing at all.

Pastore: It has no value in that respect?

Wilson: It only has to do with the respect with which we regard one another, the dignity of men, our love of culture. It has to do with those things. It has nothing to do with the military, I am sorry.

Pastore: Don’t be sorry for it.

Wilson: I am not, but I cannot in honesty say it has any such application.

Pastore: Is there anything here that projects us in a position of being competitive with the Russians, with regard to this race?

Wilson: Only from a long-range point of view, of a developing technology. Otherwise, it has to do with: Are we good painters, good sculptors, great poets? I mean all the things that we really venerate and honor in our country and are patriotic about. In that sense, this new knowledge has all to do with honor and country but it has nothing to do directly with defending our country, except to make it worth defending. (*Testimony before the Congressional Joint Committee on Atomic Energy, April 16, 1969*)

ON EXPLORING MATTER

"From the most ancient times, philosophers, and most recently physicists, have been preoccupied by the pursuit of the ultimate atom. How elusive it has turned out to be! We are reminded of Milton's words: 'And in the lowest deep a lower deep...opens wide.' Yet the search goes on and what has been found so far is both strange and wonderful." (*The Batavia Accelerator*, *Scientific American*, February 1974)

ON SCULPTURE

"When I was a graduate student at Berkeley, I used to go into the lab at night when no one was there, and construct big, kind of scary figures from whatever was lying around and leave them there for people to find the next day." (*Science Digest*, February 1986)

ON INTERNATIONALISM

"There has never been a French electricity, or a German mechanics, or an American atomic physics. The whole field advances as one big international collaboration, and physics is the same in every country of the world." (*Internationalism in Physics*, 1978)

ON BUILDING CATHEDRALS

"I, as an accelerator builder, have found great satisfaction in relating to the men who built cathedrals in the 13th Century. When Ernest Lawrence built his cyclotron with a dedicated passion, he was not that different from Suger, also with a dedicated passion, building the cathedral at St. Denis [France]. The Abbot Suger was expressing a devotion to the church with his exalted structure, a structure that transcended all contemporary knowledge of strength of materials. And Lawrence, too, expressed in his fashion a devotion to the discovery of truth. He, too, transcended contemporary technology in attaining his dizzying heights of energy." (*The Humaneness of Physics*, *Fermilab 25th anniversary symposium brochure*)

ON SUPERCONDUCTIVITY

"Superconductivity is a magic potion, an elixir to rejuvenate an accelerator and open new vistas for the future. The property of zero resistance to the flow of electrical current will allow us at Fermilab to double the energy of the proton accelerator from 500 to 1000 GeV, will make possible colliding beam energies with center-of-mass energies up to 2000 GeV, will quite possibly lead to the discovery of the intermediate vector bosons, will save millions of dollars on our electric bill—and all this at a modest cost." (*The Tevatron*, *Physics Today*, October 1977)

ON JOINING THE WAR EFFORT AT LOS ALAMOS

"It is one thing to take a philosophical position, such as pacifism, when only thoughts and statements, and not actions, are influenced. But it seemed to me that if ever the forces of darkness could be said to be lined up against the forces of light, it was at that time...That night, I chose against the purity of my soul and in favor of a liveable world. Rightly or wrongly, my conscience at the ready, I joined the new laboratory in the morning." (*The Conscience of a Physicist*, *Bulletin of the Atomic Scientists*, June 1970)

ON WITNESSING THE FIRST ATOMIC BOMB TEST AT LOS ALAMOS

"My re-awakening from being completely technically-oriented came dramatically on July 16 [1945] as I experienced the test explosion of the first nuclear bomb. It literally dwarfed the great desert basin of the Jornada del Muerto ["Journey of Death" in Spanish] and the mountains all around it. That which had been an intellectual reality to me for some three years had become a factual, an existential reality. There is a very great difference. My technical work was done, the race was run and the full awful magnitude of what we had done came over me. I determined at that moment that having played even a small role in bringing it about, I would go all out in helping to make it a positive factor for humanity." (*The Conscience of a Physicist*, *Bulletin of the Atomic Scientists*, June 1970). ☒

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Wilson Stories

How to impress a graduate student

What was it like to work for Bob Wilson? How can one encapsulate in a few sentences a life experience of working with this great man, first as a graduate student at Cornell, and then a few years later as we built the Fermilab Main Ring?

Wilson was my teacher, the most important teacher in my life.

I learned physics from him. I learned people skills from him. More than any other individual he profoundly influenced my life.

Wilson taught me how to run a milling machine in the Newman Lab shop as we built solid prototypes of the pole tips for the world's first strong focusing synchrotron.



There are wonderful stories of Wilson's charm, his decisiveness, his skill at management, but foremost about his charm and humanity. Here is a story of "how to impress a young graduate student." One evening on shift with

him at Cornell, we were looking for a leak

in the glass vacuum chamber of the "donut," using helium gas to locate the leak. Bob suspected where the leak was but the hose from the helium supply didn't reach that far. With a twinkle in his eye he took a big gulp of helium and held it in his mouth while he ran to the suspected location. He blew the helium on the rubber boot gasket and found the leak! Then he turned to me and grinned. This typifies to me everything great about the man: his decisiveness, his knowledge, his originality, and a "can do" attitude, only one of his legacies to Fermilab.

Building the Main Ring was the greatest adventure of my life. It was a complex undertaking and Bob was often criticized. He wrote me in April 1973, "A project such as this is almost beyond the scale of human endeavor. All of us in one way or another have been twisted and tortured by the sheer enormity of the responsibilities and difficulties, human as well as physical, of the job we undertook to do."

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For me that stormy and fast-paced period was special because Wilson always was at the helm. He was fearless and he was impatient with bureaucracy. He never left us hanging for lack of a decision and he shielded us from the critics. He inspired us with his eloquence and with his joy and humor that shone through all our temporary setbacks. He only required us to do our best.

— Ernest Malamud

The value of aesthetics

Back in my first years at the Laboratory, I had just taken the reins of the Switchyard and extraction group. I had inherited a summer student named Chris Winter, son of Tex Winter, later assistant coach of the World Champion Chicago Bulls and inventor of the triangle offense. Chris was a physics major at Northwestern. While he was spending his summer here, he decided that he needed a year off from school; and we managed to find him a semipermanent position as a technician in the Switchyard Group. One night I asked Chris to work some overtime involving beam instrumentation, or something— I don't really remember. The point is that he was working in the basement of the High Rise— not yet Wilson Hall— and Wilson was working that evening in the same area, doing

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grinding and welding on the obelisk that now adorns the center reflecting pond out front. Chris noticed him working nearby but had no idea who he was.

After awhile, Chris decided he would make a new friend, so he sauntered over to Wilson and asked, "What have they got you doing here tonight?"

Wilson replied, "I'm working on a sculpture for the pond out front."

To which Chris responded, "Boy, they sure can figure out more ways for you to waste your time around here!"

Well, you can imagine what happened next. I only got Chris's version, but he assured me that I need not doubt that he fully understood the value of aesthetics in this Laboratory and everywhere else, for that matter.

— Roger Dixon

Height

After Bob left Fermilab, I was surprised to notice how short he was, in photographs. He was only about 5'6" tall. At the time I was working for him, I would have sworn he was well over 6 feet. He certainly seemed at least that tall when I was working for him.

— Peter Limon

Almost scandalous

Since the middle of September, I've seen Bob nearly every day here in Ithaca. It has been difficult to communicate with him, but I did try to greet him every day. I would have liked to be able to

tell him how much I appreciate the lasting imprint he made on Fermilab.

Outside the apartment door where he was living is a female torso sculpture he did. It's been amusing to watch the elderly residents of the retirement complex whisper about it as they discover it!

Almost scandalous. I like to think that he enjoyed that.

— Betsy Schermerhorn

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Reciprocal respect

I was a an electronics technician in the early days. I guess many of us felt that Bob was "family," and we would do anything that he wanted. I can remember lying in the mud and partial concrete floor between the L1 and L2 straight sections in the 10 GeV tunnel, and along comes Bob in his yellow boots flopping in the mud and water. There I was, all covered with mud and slime and wetter than a duck's bottom, and Bob would say "Dave, do you think it will ever work?" He would reach out and help me up, hand me a towel to wipe my hands and I would say, "Bob, I guarantee that my part will work just like you want it to!"

He would always reply, "Thank you. I am counting on you all." I admired him for being so respectful for what I could contribute. I never felt as though I was just being used, or just a small cog that had no value. He was so appreciative of what and how we did what we did.

America has lost more than just a scientist, it has lost a model for what the human race needs to become.

— Dave Austin

ID 1996 (Retired)

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Ithaca

CALENDAR

Chicago Lakefront Cruise

The Recreation Office is again sponsoring a cruise aboard the Spirit of Chicago on Saturday, March 8, departing from Chicago's Navy Pier. Cost: \$45 per person. DEADLINE FOR SIGNUPS: FRIDAY, FEBRUARY 11. Contact the Recreation Office, x2548 or x5427, for information.

Web site for Fermilab events: <http://www.fnal.gov/faw/events.html>

NALWO invites Fermilab women to a cooking demonstration and tasting on Friday February 4, 2000 at 10:15am in the kitchen of the Users' Center. Call Sue Mendelsohn, x5059, mendel@fnal.gov

INTERNATIONAL FILM SOCIETY

February 11, 8:00 pm, Ramsey Auditorium, Wilson Hall \$4:00

Shakespeare in Love

Dir: John Madden USA/UK (1998) 122 min. In this delightful spirited romantic comedy, young Shakespeare (Joseph Fiennes), out of ideas and short of cash, meets his ideal woman (Gwyneth Paltrow).

LAB NOTE

URA SCHOLARSHIP INFORMATION

Candidates for Universities Research Association (URA) scholarships are reminded that applications are due March 1. Applications are available from and should be returned to Human Resources, WH 15SE, Mail Station 124.

Scholarships are awarded on the basis of S.A.T. (Scholastic Aptitude Test) scores. URA awards a number of scholarships to regular, full-time Fermilab employees' children who are currently high school seniors and who will begin a four-year college degree program next fall. The

maximum amount of the scholarship is \$3,000 for tuition and fees and is renewable for four years if the student maintains good academic standing. Applicants will be notified regarding the scholarships in early April.

MILESTONES

RETIRING

Marshia Kay, ID 3065, BSS-Accounting, effective February 22, 2000.

NOT RETIRING

Alvin Tollestrup, continuing Fermilab employee. "Rumors of my retirement have been greatly exaggerated," Tollestrup said.

CLASSIFIEDS

Classifieds will return in the next issue of FERMINES.

Chez Léon information and menus are available at <http://www.fnal.gov/faw/events/menus.html>

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N E R W M S I

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FERMINES is published by Fermilab's Office of Public Affairs.

Design and Illustration:
Performance Graphics

Photography:
Fermilab's Visual Media Services

The deadline for the Friday, February 11, 2000, issue is Tuesday, February 1, 2000. Please send classified advertisements and story ideas by mail to the Public Affairs Office MS 206, Fermilab, P.O. Box 500, Batavia, IL 60510, or by e-mail to ferminews@fnal.gov. Letters from readers are welcome. Please include your name and daytime phone number.

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