

THE END OF THE BEGINNING

Thornton Murphy

On Friday afternoon, March 18, the last of the 990 superconducting magnets which comprise the Energy Saver was installed beneath the Main Ring with much fanfare. About 70 Fermilab officials and workers and representatives of the Department of Energy gathered at A-49 in the Main Ring to witness the event. There followed an even larger celebration in the atrium of Wilson Hall.

During the morning of the same day, the last of the 774 dipoles had been unceremoniously set-apart from a handwritten sign on the magnet saying "The Last Dipole-Treat Me Nicely" and a videotape unit which recorded the installation technique for posterity. At 3:30 p.m. that afternoon, following an earsplitting whistle to clear the spectators, the last quadrupole was towed into the area. Riding shotgun on the tractor was Leon Lederman, wearing a necktie and appearing to be in command. In a record time of 12 minutes, three millwrights offloaded the magnet and inserted it in its slot under the Main Ring. Following a round of applause, the workers and the assembled dignitaries all signed a large placard on the magnet bearing the inscription "The Last Magnet Installed in the Energy Saver" (see cover). In addition to the Director, Associate Director, and nearly all the division and section heads of Fermilab, the ceremony was attended by Jim Leiss and Bill Wallenmeyer of DOE, who flew in from Washington, and Fred Mattmueller and Bob Bauer of Chicago DOE.

This milestone brings to a close 21 months of steady effort to install magnets in the Energy Saver. The effort was interrupted only by the 400-GeV physics run during the first six months of 1982 and occasional pauses while waiting for more magnets to be produced. The actual work was done by a seven-man team of operators, ironworkers, and millwrights supplied by Belding Corporation, under the supervision of the Accelerator Mechanical Support Group.

This doesn't mean that the Energy Saver can be turned on tomorrow. There remain a few spool pieces and non-magnetic elements to install before the ring is complete, and the major task of connecting the magnets and leak checking the strings of magnets has yet to be completed in one-sixth of the ring. In addition, mechanical, electrical, cryogenic, and controls technicians are working feverishly to complete their parts of the Saver. The Main-Ring group and the Accelerator Operations group are working around the clock on three-day weekends to recommission the Main Ring, now reduced to a 150 GeV "injector" to the Energy Saver.

In much the same spirit as the last lap of a very long foot race, there is much excitement, enthusiasm, and extra adrenalin

being expended as the end comes in sight. The Energy Saver project is on course for its goal of cooling and powering the entire ring and circulating beam sometime in June of this year.



The last magnet in the tunnel. Thornton Murphy is in the foreground. Also visible (left to right) are Phil Martin, Jim Finks, Bill Cooper, Craig Moore, Bob Morrison, Bruce Chrisman, Lee Teng, Bill Wallenmeyer (DOE), Bob Wendt, Fred Mattmueller (DOE), Leon Lederman, Bob Bauer (DOE), Tom Collins, and Jim Fritz.

(Photograph by Fermilab Photo Unit)



Rine DeKing with other Belding personnel, Ken Meisner (standing) and Wally Peterson (kneeling), fit the last quadrupole as Fermilab staff and well-wishers gather to view the installation of the last Saver magnet. Elsewhere, celebrants gathered in the atrium of Wilson Hall to mark the occasion.

(Photograph by Fermilab Photo Unit)