

berg's trip to Leipzig in 1922, to hear Einstein talk. But Nazi protesters were so threatening, even in those early days, that Einstein cancelled, fearing for his safety. Holton also told of Heisenberg's 1926 conversation with Einstein about the new quantum mechanics. As Heisenberg remembered it, Einstein chided: "You don't seriously believe that a theory must restrict itself to observables. Perhaps I did use this sort of philosophy, but it's nonsense. Only the theory decides what one can observe."

## Ghosts on stage

The evening session was devoted to a discussion of the play with Frayn and director Michael Blakemore. The English playwright became famous for his rollicking comedy *Noises Off*. His university degree was in philosophy. Frayn's interest in the 1941 Copenhagen encounter was first aroused by Thomas Powers's book *Heisenberg's War*, which takes a more sympathetic view of the physicist's wartime role than does Cassidy.

The play imagines a posthumous rehashing of the events by the ghosts of Heisenberg, Bohr, and his wife Margrethe. Their recollections, often conflicting, flit back and forth over 25 years—from Bohr's first encounter with the brilliantly brash young Heisenberg to their unbearably strained reunion in Copenhagen after the war. Margrethe, serving almost as a Greek chorus, is much the harsher judge of Heisenberg. Finding that Frayn's Margrethe was very far from the woman she had known so well, Bethe's wife Rose asked how he had arrived at this portrayal. In response, Frayn pleaded artistic license.

In the New York production, Bohr and Margrethe are played by Philip Bosco and Blair Brown. Michael Cumpsty, who plays Heisenberg, came to the talks by Bethe, Wheeler, and the historians, presumably to learn more about the terribly enigmatic man he is portraying.

At the symposium, Nancy Green-span, who's preparing a biography of Max Born, showed me a photocopy of a 1947 letter from Born to his son Gustav, describing a postwar conversation with Heisenberg: "His philosophy of life is definitely somewhat infected by Nazi ideas. He has a kind of 'biological' creed, 'survival of the fittest,' applied to human relations, and seems to regret more that the Germans have not turned out to be the fittest, than what we regard to be the sad and regrettable things."

**BERTRAM SCHWARZSCHILD**

# UK Ends Site Stalemate by Sending Synchrotron South

The UK's new synchrotron x-ray source will be built at the Rutherford Appleton Laboratory near Oxford, the British government announced on 13 March, ending a bitter battle over the siting of the planned facility (see PHYSICS TODAY, January, page 50).

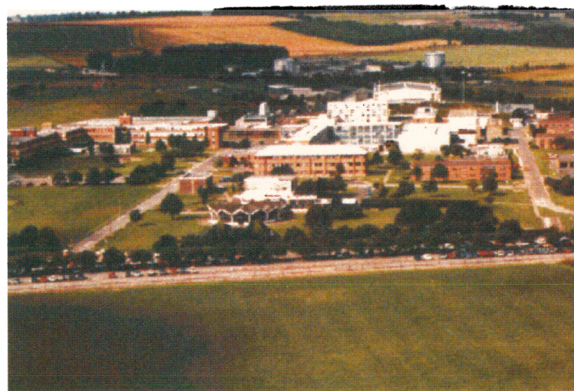
In his announcement, science minister David Sainsbury said that Rutherford was chosen over the competing site, Daresbury Laboratory, which lies some 160 miles to the northwest and is home to the country's existing synchrotron, "after a careful analysis of scientific, technical, operational and financial issues and the views of the funding partners." The implication is that the UK's partners in the \$275 million synchrotron—the Wellcome Trust and the French government—would have withdrawn their support had Daresbury won out. A government press officer elaborated: "We needed to secure funds. We couldn't go ahead without the others."

Actually, it's hard to tell who bullied whom about where to build the synchrotron. Early on, the Wellcome Trust pressed for an open site competition. But the UK government offered up only the two sites, and then last summer said the new synchrotron would be built at Rutherford. That's when Daresbury scientists mounted a campaign to site the facility at their own lab. Subsequently, the Wellcome Trust, a major funder of human genome research, threatened to pull out of the project if it didn't go to Rutherford, which it prefers because of the biomedical companies clustered nearby. The French government officially had no site preference, but said it would participate only if the Wellcome Trust remained on board. (French scientists, for their part, are still lobbying to resurrect plans to get a synchrotron on their own soil. Their hopes were raised by the 24 March ousting of science minister Claude Allègre; see story on page 53.) The site decision remained stalled for months.

The plan now is to keep the Daresbury facility running for seven years—overlapping with the new synchrotron's expected start date by about two years. The government is also looking into options for boosting

the scientific and economic base in the northwest, including possible future uses of the Daresbury site. "I think there is great relief in the user community that we can go ahead with the synchrotron," says Gordon Walker, who oversees both the Daresbury and Rutherford labs for the UK's Central Laboratory for the Research Councils.

That's not how people at Daresbury see it, though. "The mood here is angry," says Andrew Hopkirk, a Daresbury scientist and staff representative. "Had there been a competition [for the site], many here would have reacted professionally. But that



RUTHERFORD APPLETON LABORATORY in Oxfordshire prevailed in a drawn-out battle over where to site the UK's new synchrotron.

was short-circuited, hence all the upset. It appears that rationality was not the most significant part of the decision-making process." Daresbury employees aren't alone in being disgruntled: Six of the 35 scientists recently consulted by the government have written to Prime Minister Tony Blair claiming they weren't allowed to state their site choice—Daresbury.

Meanwhile, notes Hopkirk, several Daresbury scientists and engineers have resigned, and others are scouting for new jobs. If too many of them take their expertise out of the country, building the new machine could become a problem.

A reversal in the site decision is unlikely. And, once the project finally goes ahead, the UK will get a much bigger and better synchrotron than was intended before the Wellcome Trust and the French government signed on.

**TONI FEDER**