A phase II clinical trial of the drug in people with mild or moderate Alzheimer's, coordinated by Colin Masters of the University of Melbourne in Australia with technical assistance from Bush, should start to answer questions about both the safety of long-term use and, perhaps, the drug's efficacy. The team expects to have the results from the trial in about a year. **–LAURA HELMUTH**

PARTICLE PHYSICS

The Final Tally Leaves LEP a Probable Loser

LONDON—The future of research at CERN, the European particle physics laboratory near Geneva, is proving only slightly easier to resolve than the identity of the next occupant of the White House.

Due to be dismantled in September, the lab's Large Electron-Positron (LEP) collider was granted a 1-month reprieve to continue experiments suggesting it had found evidence for the Higgs boson, a theoretical particle that physicists have coveted for decades. Last week LEP scientists presented the new data to CERN's management, saying the case for the Higgs was strong enough to merit another, longer reprieve. But management didn't budge. On 8 November, CERN's director-general announced that LEP would be scrapped to make room in the 27-kilometer-long tunnel to begin installing the Large Hadron Collider (LHC).

With LHC waiting in the wings, LEP scientists this summer had pushed the machine's beam energies to the max. On 2 November, after a month of extra operation, the team crammed into CERN's auditorium to review the latest evidence. The scene was not unlike a recount. One event once seen as evidence for the Higgs was withdrawn, while another event was added. Evidence gathered last summer was recalculated and revealed to be less significant than thought. But the new evidence was clearly stronger. Summing up the case for the Higgs, Peter Igo-Kemenes drew loud laughter and prolonged applause when he dryly remarked that "all this is very exciting." The four experimental teams jointly called for another year's operation to settle the matter.

But the elation evaporated at a private meeting straight after of the committee of scientists from CERN and elsewhere who oversee LEP. "It was subdued," one committee member told *Science*. "Nobody banged on the table. And that reflects the data, which is 50–50." Although models gave the combined results only about a 1% probability of being due to chance, the LEP committee knew that such statistics do not tell the whole story (*Science*, 29 September, p. 2260). The signal was getting stronger with time, the panel agreed, but there was no guarantee that the trend would continue.

The committee did agree that spending $62 million to keep LEP running for another year was worth it. But not at the cost of delaying the LHC by a year—a decision with financial and political ramifications, because the LHC program includes partner countries with no stake in LEP. Thus the committee split on LEP's future. This came as a blow to rank-and-file LEP scientists, who argued that the LEP committee should have focused on the machine's scientific potential and disregarded the impact on LHC.

CERN's senior management—the directorate—then took up the issue. A consensus favored moving ahead with LHC, but the decision was not final. Four days later, the lab's research board, of which the directorate forms a subset, was convened.

According to LEP experimentalist David Miller of University College, London, one of two outside scientists on the board, this panel, too, was split. CERN's management team opposed an extension, whereas many of those representing the lab's various experiment committees and specialist divisions were in favor. "It was a painstaking meeting," Miller says, in which every aspect was scrutinized. "In no way was the directorate trying to rush through its own ideas."

But in the end the research board remained split, leaving the decision in the hands of director-general Luciano Maiani. George Kalmus, chair of the Science Policy Committee that advises CERN's ultimate masters, the council of delegates of the member states, told the director-general that an e-mail poll of his top-level committee revealed a small majority in favor of shutting LEP down. And that is what Maiani decided to do.

Originally, the director-general left the final ratification of that decision to a council meeting scheduled for December. Then, perhaps to head off further discussion, a special committee of the council was called for 17 November, presumably to sign the death warrant. In a very unusual move, the executive committee of CERN's staff association spoke out against the decision, expressing "astonishment and incomprehension" and saying that the case against LEP had not been made clearly enough. So although LEP looks dead, it's not over till it's over—as they say in Palm Beach County, Florida.

–OLIVER MORTON

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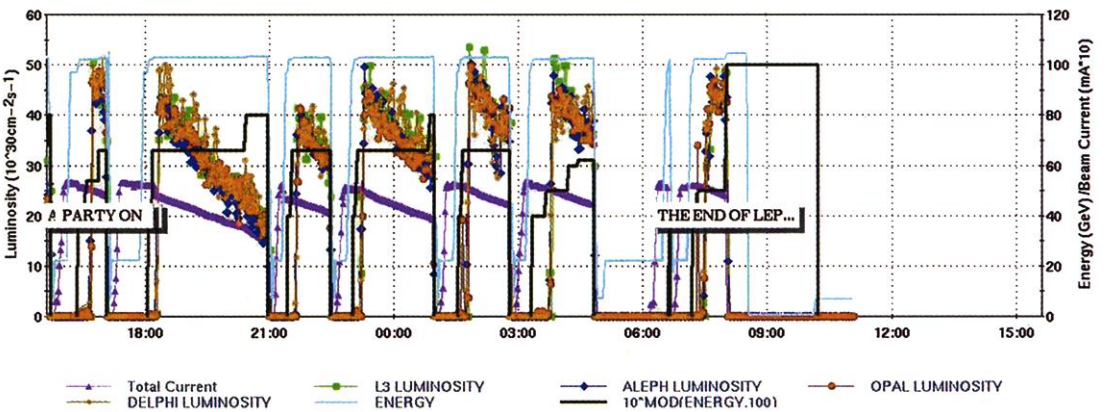

Flatlined. LEP's beam intensity at four experimental stations before the plug was pulled at 8:00 a.m. on 2 November.

CREDIT: CERN

GEOPHYSICS

Core Takes a Page From the Sea Floor

There's probably no stranger place in all Earth's layered interior than the intersection of the molten iron of the core with the bottom of the rocky mantle, 2900 kilometers down. This boundary produces the most dramatic effects on seismic waves traveling below the near-surface. Exactly what the core and mantle might be doing to each other to affect seismic waves so powerfully, however, has remained a mystery. Now one group of geophysicists is suggesting that the boundary most resembles an inverted sea floor, with liquid-iron–laced sediments collecting on the roof of the core.

The case is made on page 1338 of this issue by geophysicist Bruce Buffett of the University of British Columbia in Vancouver, seismologist Edward Garnero of Arizona State University in Tempe, and mineral