

People and things

backgrounds from synchrotron radiation and degraded beam particles. After careful study, these backgrounds have been minimized by judiciously placed masks.

Looking further ahead, other improvement projects should push the luminosity to twice its present multi-bunch level. The first is to modify the injection system to provide more reliable injection. The second is to install rare-earth/cobalt permanent quadrupole magnets close to the interaction points to squeeze the colliding beams closer together. These projects should be completed in time for the arrival of the CLEO II detector (see April issue, page 106).

Change at the top

Boyce McDaniel stepped down as Director of Cornell's Floyd R. Newman Laboratory of Nuclear Studies on 1 July. His 18 year period as Director included both the 12 GeV electron synchrotron and the CESR electron-positron collider. While on leave from Cornell in 1972, he served as head of the Accelerator Division at Fermilab during the commissioning of the (then) 400 GeV accelerator. McDaniel is a member of ICFA (International Committee for Future Accelerators), and is chairman of the Board of Overseers for the US Superconducting Super Collider (SSC) project. He continues as Cornell Professor of Physics.

New Cornell director is physicist Karl Berkelman.

Future of CERN

Under the chairmanship of Carlo Rubbia, a 'Working Group on the Scientific and Technological Long-term Future of CERN' has been set up 'to explore various options for the long-term future of CERN, taking into account existing facilities (infrastructures), emphasizing respective pros and cons; in working out these options, realistic boundary conditions concerning financial and manpower limitations should be taken into account.' Members of the Group are Giorgio Brianti (CERN), Pierre Darriulat (CERN), Gösta Ekspong (Stockholm), Carlo Rubbia (Chairman), Abdus Salam (London and Trieste), Samuel C. Ting (MIT), Simon van der Meer (CERN), and Gus Voss (DESY). ECFA Chairman J. Sacton will attend the meetings of the Group as an observer. The first meeting took place on 5 June.



Carlo Rubbia - looking at the long-term future of CERN.

Heavy neutrino?

A big question mark still looms over the mass of the neutrino. Is this particle truly massless, moving at the speed of light, or has it some small mass? For some time, bench-top experiments in Moscow and elsewhere studying beta decay have been suggesting that the electron-type neutrino weighs somewhere in the region from 20 to 45 eV.

One sensitive test for neutrino mass effects is the shape of the electron emission spectrum measured in beta decay. The detailed shape of the spectrum at the high energy end is governed by the mass of the electron-type neutrino. In a recently published result, John Simpson of the University of Guelph, Ontario, Canada, reports instead a distortion at the low energy end of the beta decay spectrum of tritium. Simpson, who has been studying tritium decay for four years, interprets this as being due to a heavy (17.1 keV) neutrino.

Such a mass, although very light compared to other particles (the lightweight electron is 511 keV), is unparalleled in neutrino circles, and will be sure to set the theorists thinking.

Constant Tièche

Constant Tièche, retired head of CERN Finance and architect of much of CERN's financial administration, died on 27 May.

Mervyn Hine retires

Mervyn Hine, one of CERN's founder members, retired at the end of May. He came to the Laboratory, together with the late John Adams, in 1953 and played a leading role in the design, construction and commissioning of the 28 GeV Proton Synchrotron.

On completion of the machine, he began a ten-year period of major responsibility in the CERN hierarchy working with Directors General Adams, Weisskopf, Gregory and Jentschke. Viki Weisskopf, in particular, paid tribute to Hine as being the powerhouse behind the work of the CERN management at that time.

He has contributed to accelerator development, to project presentations, to establishing financial procedures and to promoting developments in the Laboratory infrastructure (like the use of big computers, networks, high speed data links and office automation). His thinking and his forward vision have helped CERN to be ready when 'the future' arrived.

Mervyn Hine is one of the pioneers who created CERN and who helped forge its particular character from which the Laboratory is now reaping the benefit.

Mervyn Hine

ATLAS at Argonne

ATLAS, short for Argonne Tandem Linear Accelerator System and the world's first superconducting heavy ion accelerator, was dedicated at the US Argonne National Laboratory on 3 June. The new linac boosts the energies of particles emerging from a tandem Van de Graaff and provides a useful extension to the range of nuclear physics studies at Argonne. Similar machines are under construction at Florida State and Kansas State Universities.

French Academy of Sciences

Detector specialist Georges Charpak of CERN was recently elected a member of the prestigious French Academy of Sciences.



Georges Charpak