

CERN Courier Archive: 1968

A LOOK BACK TO CERN COURIER VOL. 8, DECEMBER 1968, COMPILED BY PEGGIE RIMMER

FACES AND PLACES

CERN and other laboratories

On 18 December, the Council agreed to offer John Bertram Adams the position of 300 GeV Project Director. The choice came as no surprise and the news has been greeted with a wave of enthusiasm throughout CERN. To a great number of people he is inextricably linked with memories of the adventure of constructing the 28 GeV proton synchrotron, when he demonstrated both his great technical ability and qualities as a leader. The 300 GeV laboratory is a sterner proposition, worthy of his talents.



John Adams.

Last year, the highest-energy electron synchrotron in the world was brought into operation at Cornell University, USA. The project had been instigated and led by Prof. R R Wilson prior to his moving to Batavia to direct the 200 GeV project. In tribute to his leadership, the laboratory housing the synchrotron has been named the Wilson Synchrotron Laboratory and a dedication ceremony was held on 10 October.



H A Bethe (left) who was awarded the 1967 Nobel Prize for Physics, mainly for his work on the energy processes in stars, tours the magnet ring of the 10 GeV electron synchrotron at Cornell accompanied by the director of the laboratory, B P McDaniel. (Image credit: World wide photo.)

On 1 December, a “ground breaking” ceremony took place at the National Accelerator Laboratory where the USA 200/400 GeV accelerator is being constructed. Over 1000 people came together, despite the snow, to attend the ceremony, which took place at the intersection of the linac and the booster ring.

Construction of prototype underground enclosures for the Booster Ring and the Main Ring are under way. Detailed design of the Booster building has been completed. It is scheduled to be ready by May 1970 to enable the Booster to produce 10 GeV beams by July 1971.

● Compiled from texts on pp310, 311–313.

ELECTRONICS

International collaboration

Many research centres have felt, for some time, the need for a modular mechanical system to be used with compact integrated circuitry. When small, cheap computers came onto the market this need increased, perhaps especially in subnuclear physics research. Up to now, various local solutions have been evolved – virtually one for each research centre. This imposed restrictions on the interchangeability of equipment and meant that manufacturers had no guarantee of a large market when building units of a particular system.

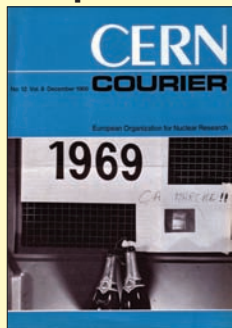
CERN first broached this problem by adopting the NIM [Nuclear Instrumentation Module] standard, originally specified by the Atomic Energy Commission in the USA to achieve standardization in government centres throughout the United States. This was taken over by CERN with a minor modification in that small LEMO coaxial connectors are used instead of BNC, leading to compact instrumentation even for large experiments (BNC/LEMO adaptors are available). Some 500 NIM units have been successfully used at CERN. The system will continue to be used until the need for computer control of these fast-logic instruments becomes paramount.

CAMAC [Computer Automated Measurement And Control] is a new modular electronics system well adapted to the data-handling field. It has resulted from discussions involving all members of the ESONE committee (European Standard for Nuclear Electronics), triggered by the UK AERE [Atomic Energy Research Establishment] delegation in autumn 1966.

By the beginning of 1968, the system had evolved to a stage where it seemed to suit everyone's major requirements. Representatives of almost all large European laboratories and universities met in May and the first official announcement of the agreement reached was made in “Nuclear Instruments and Methods” in September. It represents an important advance in standardization throughout Europe, offering an electronic system with wide applications other than in nuclear physics. One direct result will probably be substantial support from industry.

● Compiled from text on p314.

Compiler's Note

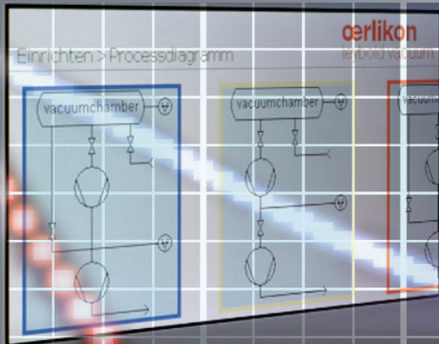


With the advent of electronic detectors, CERN became an enthusiastic participant in international efforts to standardize the associated data collecting and recording hardware, although the temptation to tweak occasionally proved irresistible.

With the advent of affordable computers, a plethora of operating systems, languages and communication protocols – some proprietary, some home-grown – made it difficult to achieve common solutions to common problems. Brand and tribal loyalties set in, not unlike today's MAC versus PC fan bases. For example, CERN developed its own network, CERNET, and even an in-house dialect of FORTRAN! Nonetheless, it seemed clear that real benefits could accrue from conformity, wherever

and whenever possible, and this conviction persisted until eventually Tim Berners-Lee was able to get his standards – URLs, the HTTP and HTML – accepted, worldwide. The rest, as they say, is history.

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