Léon Van Hove 1924-1990

Léon Van Hove, eminent Belgian theoretical physicist and Research Director General of CERN from 1976-80, died on 2 September, only eighteen months after a special symposium at CERN marked his 65th birthday and his formal retirement from the Organization to which he had contributed so much.

After training in mathematics he made fundamental contributions to field theory, statistical mechanics and phase transitions, crystal structure, and neutron scattering as a tool to study condensed matter. For this work he was awarded the US Dannie Heinemann Prize in 1962. He had been working in Utrecht when Viktor Weisskopf invited him in 1961 to lead CERN’s Theory Division, succeeding M. Fierz, who was moving to Zurich to take the chair vacant after Pauli’s death in 1958.

Van Hove played a major role in establishing the reputation of CERN’s Theory Division as a world forum for particle physics ideas. With these theorists working alongside high energy experimenters, he stressed the importance of phenomenology in the quest for new understanding. With his background in statistical physics, Van Hove saw the mass of off-resonance particle production data from bubble chambers, previously discarded, as being ripe for exploitation.

In 1971, Van Hove moved to Munich after Werner Heisenberg retired as Chairman at the Max Planck Institute for Physics and Astrophysics.

In the early 1970s two CERN Laboratories existed side by side—the original Meyrin (Switzerland) site and the new Prévessin (France) campus of the 400 GeV SPS proton synchrotron. In 1976 these sites were formally amalgamated, with John Adams as Executive Director General and Van Hove as Research Director General.

Under his guidance, the research programme at the SPS flourished, while monumental decisions were taken to go for the proton-antiproton collider, with two big experiments. Van Hove took a special interest in this project, which went on to bring unprecedented honours to CERN and propel the European Laboratory to the forefront of the world research stage. His Research Director General mandate also saw the proposal for the LEP electron-positron collider and initial ideas for its experimental programme. His coordination helped the project receive its rapid consensus approval from the physics community.

Subsequently his vision and experience were widely sought in other European research committees, but with more time available for physics he returned to full-time research with new vigour, making important contributions to current thinking on the behaviour of quarks and gluons under extreme conditions and the interpretation of results from experiments using high energy ion beams. He also contributed significantly to the analysis of multiple particle production, where he had been invited to report at the recent Singapore meeting, but had to be replaced by his collaborator A. Giovannini.

With the convergence of ideas from particle physics, cosmology and astrophysics, he helped establish the joint CERN/European Southern Observatory (ESO) Symposia on Astronomy, Cosmology and Fundamental Physics as a regular platform. His own powers of synthesis were the source of valuable guidance in this area.

At ease in French, Flemish, German and English, and with a university career spanning several countries, Van Hove was a cultured European. His penetrating insight was frequently evident in major conferences, where his objective comments and conclusions would frequently reorient muddled thinking and provide a real focus for attention.

Earlier this year, he was invited to give the Nishina Memorial Lecture in Tokyo, where in one of his final public appearances he spoke on ‘Particle Physics and Cosmology – New Aspects of an Old Relationship’. Put in a more general context, his concluding remarks mirrored his own disciplined attitude to science – ‘a redeeming feature in the midst of so much speculation is the slow but tenacious high quality work being done by observational …… and experimental physicists, while phenomenological theorists carefully evaluate results and confront the various interpretations, the only way to advance in the difficult quest for new …… knowledge of lasting significance’.

Other tributes will appear in a forthcoming issue.

CERN Courier, September/October 1990