



2006 André Lagarrigue Prize

Under the sponsorship of the French Physics Society (SFP) and on the occasion of Orsay Linear Accelerator Laboratory (LAL) 50th birthday, a new prestigious award amounting to 3000 € has been created in honor of Professor Andre Lagarrigue. Director of the LAL from 1969 upon his untimely death in 1975, Andre Lagarrigue discovered in 1973, neutral currents of the weak interaction, a crucial step in establishing the present theory of particle physics. The André Lagarrigue prize will reward a senior physicist who has led the construction of large equipment and who has extracted the best of it, in a strong team spirit, and having carried out his work in a French laboratory or in very close collaboration with French teams. It is co-financed by the CEA, CERN, Ecole Polytechnique, IN2P3, LAL and the University Paris Sud 11.

The international jury of the Andre Lagarrigue Prizeⁱ met on December 5, 2006 under IN2P3 director Michel Spiro chairmanship. and reviewed the 11 nominees proposed by the French community of particles physics following a call for proposal sent to all French lab directors.

The winner of the first Andre Lagarrigue Prize is **Jacques Lefrançois**, emeritus research director of exceptional class at CNRS. Jacques Lefrançois is one of the world wide uncontested leaders in particles physics, and his exceptional career is by all means worthy of Andre Lagarrigue's, with the same qualities of very complex experimental devices builder, of acute physics comprehension, with a communicative enthusiasm and the same passion for younger people training.



Born in 1937 as a Canadian citizen, Jacques Lefrançois obtains his PhD. Degree at Harvard University (USA) in 1961. He then joins the Laboratory of the Linear Accelerator of Orsay where he spends his whole career, with the exception of several periods when he was detached to CERN in Geneva. As of 1967, Jacques Lefrançois is in charge of a group of 10 physicists at the Orsay colliding ring (ACO) and obtains very precise measurements on the ϕ meson which allow important tests on the quarks model still in infancy at the time. He then plays a main part in the construction, the implementation and the data handling of the first large dimuon experiment at CERN, called NA3 or "Lizard". This experiment played a fundamental part in the implementation of quantum Chromodynamics (QCD) focusing on the fact that the very important deviations observed between the experimental results and the lowest order

theoretical prediction were those actually predicted by QCD.

A climax in Jacques Lefrançois' career is the ALEPH experiment, one of the 4 experiments set up at the large e^+e^- collider LEP at CERN. He was responsible for the electromagnetic calorimeter construction, centre piece of this equipment, and directed

this large international collaboration from 1990 to 1993. Under his leadership, ALEPH measured with an unequalled precision the properties of the Z0 boson, precisely the one responsible for the neutral currents observed by A. Lagarrigue 20 years earlier, as well as the number of neutrinos, the top quark's mass, the limits on the Higgs boson's mass, the coupling constant of the strong interaction, the beauty mesons properties... This exceptional harvest would justify by itself this award, but Jacques Lefrançois continued with enthusiasm his builder career and is presently involved in the LHCb calorimeter electronics. The LHCb experiment will start in 2007 at the CERN LHC collider.

Jacques Lefrançois directed the Laboratory of the Linear Accelerator from 1994 to 1998 and chaired many major international committees in particular the CERN Scientific Policy Committee from 1996 to 1998, and the scientific committee of the VIRGO project in 2003.

It is thus with an immense pleasure that the jury awards the first André Lagarrigue prize to Jacques Lefrançois, an excellent physicist of the same stature than his famous elder.

ⁱ The jury members are :

M. Spiro (*IN2P3, president*), J.J. Blaising (*CERN*), J.C. Brient (*Ecole Polytechnique*), E. Fiorini (*INFN - Milan*), J. Iliopoulos (*ENS Paris*), G. Kalmus (*RAL*), M. Leduc (*SFP*), D. Leith (*SLAC*), M.N. Minard (*LAPP*), V. Ruhlmann-Kleider (*DAPNIA/CEA*), A. Wagner (*DESY*), G. Wormser (*LAL*), F. Zomer (*Université Paris Sud 11*)