Physics monitor

James Bjorken (left) and Bo Andersson during the Conference Dinner for the XXVII International Symposium on Multiparticle Dynamics, held at INFN Frascati.  
(Photo S. Kittel-Haböck, Nijmegen)

could be of major importance. FCNC tests at a Higgs factory would be the ultimate test of the NFC concept.

According to the Standard Model, the mixing of neutral D mesons is expected to be extremely small. In contrast, mixing in the neutral kaon and B meson sectors is large and deviations could be difficult to see. Neutral D mixing could therefore be a physics treasure trove, probing energies inaccessible even at the LHC.

The next such FCNC meeting will be held in 2001, a fitting start to the physics of the next millennium.

By David Cline, UCLA

Multiparticle dynamics

Multiparticle dynamics now ranges from particle correlations and multiplicity distributions to colour coherence effects, from heavy ions to cosmic rays, from jet dynamics to total cross-sections. Thus the XXVII International Symposium on Multiparticle Dynamics had a lot of ground to cover. The meeting took place at INFN Frascati, Italy, from 8 - 12 September, attended by approximately 100 physicists. Frans Verbeure, secretary of the Multiparticle Dynamics Conferences, following into the recent retirement of Douglas Morrison, chaired the first session.

Recent results on high energy, large momentum transfer processes at Fermilab’s Tevatron (proton-antiproton collisions), CERN’s LEP (electron-positron) and DESY’s HERA (electron-proton), were followed by presentations on the interplay between soft and hard processes. After Bo Andersson discussed quark-gluon cascades, the sessions concentrated on soft interactions.

Discussion of Bose-Einstein correlations, factorial moments and scaling behaviour in hadron-hadron collisions were followed by heavy ion sessions.

During the last two days, attention shifted to diffractive and total cross-sections and the possibility of measuring them at CERN’s LHC. Karsten Eggert from CERN presented the project FELIX (October, page 9), which sets out to measure physics processes of interest to this community.

On the last day, two different fields, charmonium production in hadronic interactions and the structure of the Pomeron were discussed, with a unifying point of view by Francis Halzen, who sees the evaporation model at the heart of both of them, thus leading the way to a discussion of the octet model for quarkonium production.

J. Bjorken’s summary talk was preceded by a short presentation of Frascati’s KLOE detector at the DAPHNE phi-factory (July, page 8). The next Multiparticle Dynamics Symposium will be organized by Nikos Antoniou from Athens and will be held in Delphi, Greece, in September 1998.

The Conference opened by remembering Valodia Gribov and Peter Carruthers, recently passed away, but whose participation in the symposia has contributed much to this field.

Most of the talks of this Conference are available at http://www.infn.infn.it/conference/ismd97.html.

Euroconference

QCD 97

Quantum chromodynamics (QCD), the field theory of quarks and gluons, has a traditional summer venue in Montpellier, France. QCD 97 was the 5th High Energy Physics Quantum Chromodynamics Conference organized by Stephan Narison there since 1985, and was second of the new Montpellier Euroconference Series in QCD sponsored by Brussels.