INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS

20th Course: GAUGE INTERACTIONS: THEORY AND EXPERIMENT

ERICE-TRAPANI-SICILY: 3-14 AUGUST 1982

Sponsored by:
- European Physical Society
- Italian Ministry of Education
- Italian Ministry of Scientific and Technological Research
- Sicilian Regional Government
- Weizmann Institute of Science

PROGRAMME AND LECTURERS

OPENING LECTURE
Unification of the fundamental gauge interactions
- C.N. YANG, SUNY, Stony Brook, NY, USA

THEORETICAL LECTURES

- Foundations of gauge theories and present status
  - C.N. YANG, SUNY, Stony Brook, NY, USA
- Supersymmetry and unification of particle interactions
  - S. FERRARA, CERN, Geneva, Switzerland
- Experimental implications of gauge theories
  - D. NANOPOLOUS, CERN, Geneva, Switzerland
- Testing QCD in purely hadronic processes
  - P. LANDSHOFF, University of Cambridge, Cambridge, UK
- QCD predictions for heavy-flavour production
  - R. ODORICO, University of Bologna, Bologna, Italy
- Alternatives to the standard model of the electroweak interactions
  - J.J. SAKURAI, MPI, Munich, FRG
- Exact results for (pp) and (p(b)) at extreme energies
  - A. MARTIN, CERN, Geneva, Switzerland

SEMINARS ON SPECIALIZED TOPICS

- Photon scattering at very high energies
  - C.A. HEUSCH, University of California, Santa Cruz, Calif., USA
- Higgs particles from gauge fields
  - H. KLIEINERT, Free University Berlin, Berlin, FRG
- Results from the CERN "p̅p" collider
  - C. RUBBIA, CERN, Geneva, Switzerland
- Experimental proposal for LEP
  - G. WOLF, DESY, Hamburg, FRG

REVIEW LECTURES

- Review of high-energy e⁺e⁻ physics
  - J. BRANSON, MIT, Cambridge, Mass., USA
- Status of and search for new leptons at PETRA
  - P. DIJKNEER, NKHEF, Amsterdam, NL, and DESY, Hamburg, FRG
- The photon structure function
  - Ch. BERGER, I. Physikalisches Institut der RWTH, Aachen, FRG
- Status of deep inelastic phenomena
  - F. EBNELE, University of Dortmund, Dortmund, FRG
- Heavy flavours produced in hadronic interactions
  - F. MULLER, CERN, Geneva, Switzerland
- High-energy soft (pp) interactions compared with (e⁺e⁻) and DIS
  - A. ZICHICHI, CERN, Geneva, Switzerland

THE GLORIOUS DAYS OF PHYSICS

A round table with:
- P.A. CHERENKOV, USSR Academy of Sciences, Moscow, USSR
- CHEN SAN-QIAN, Chinese Academy of Sciences, Beijing, China
- P.A.M. DIRAC, Florida State University, Tallahassee, FL, USA
- E. TELLER, University of California, Livermore, Calif., USA
- E.P. WIGNER, Princeton University, Princeton, NJ, USA
- C.N. YANG, My Life as a physicist

CELEBRATION OF C.N. YANG's BIRTHDAY
- E. TELLER, University of California, Livermore, Calif., USA

CLOSING LECTURE

What I think of gauge theories
- P.A.M. DIRAC, Florida State University, Tallahassee, FL, USA

GENERIC INFORMATION

Persons wishing to attend the Course should write to the Secretary of the School:
- Miss MARIA ZAINI
  - International School of Subnuclear Physics
  - CH - 1211 Genève 23 - Switzerland

They should specify:
1) date and place of birth together with their present nationality;
2) degree and present academic position;
3) list of publications;
4) present position and place of work;
5) a letter of recommendation from their research group leader or from another senior physicist active in the field.

The subscription fee is SF 1,000. Thanks to the generosity of the sponsoring institutions, partial support can be given to some deserving students who need financial help. The request for such aid must be specified and justified in the letter of application.

**PLEASE NOTE** that the special scholarships as well as any other form of financial support will be awarded in consultation with the Board of Lecturers at the end of the Course, in order to allow a more direct judgement of all the applicants.

Closing date for application: 20 July 1982
No special application form is required

A letter will be sent to successful applicants by 25 July 1982. Applicants who may have difficulties with travel documents and who would like to know before 25 July whether or not their applications have been accepted, may obtain a special earlier decision by submitting a justified request.

Participants must be in Erice on 5 August, not later than 5 p.m. More detailed information will be sent to successful applicants together with the letter of acceptance.

A. ZICHICHI - DIRECTOR