INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS

32nd Course: FROM SUPERSTRING TO PRESENT-DAY PHYSICS

ERICE-SICILY: 3 - 11 JULY 1994

In collaboration with the World Laboratory
and under the auspices of the Presidency of the Council of Ministers of Italy

Sponsored by the: * Academies of Sciences of Estonia, Georgia, Lithuania, Russia and Ukraine*
* Chinese Academy of Sciences * Coordination of the European Communities * European Physical Society *
* Italian Ministry of Education * Italian Ministry of University and Scientific Research * Skilinin Regional Government
* Weizmann Institute of Science

PROGRAMME AND LECTURERS

OPENING LECTURE
The Glorious Future of Particle Physics
* D.J. GROSS, Princeton University, NJ, USA

STATUS OF THE STANDARD MODEL
First Evidence for Electroweak Radiative Effects from the Latest High Precision Data
* L.M. OXIN, ITEP, Moscow, Russia

QCD
Towards a String Theory of QCD
* D.J. GROSS, Princeton University, NJ, USA

STATE OF THE SUPERWORLD
The BOTTOM-UP Approach
* A. ZICCHICHI, CERN, Geneva, Switzerland

The TOP-DOWN Approach
* D.V. NAPOLIAOLOS, Texas ADU Univ., College Station, USA

Searching for SUSY Dark Matter
* R. ARNOLD, Texas ADU Univ., College Station, USA

NEUTRINO PHYSICS
Implications of Solar Neutrinos
* P. LANGACKER, Univ. of Pennsylvania, Philadelphia, PA, USA

Antineutrino Masses
* D.K.O. MORRISON, CERN, Geneva, Switzerland

SPECIALIZED TOPICS

Master Antimatter Symmetry
* L. MAJANI, INFN, Rome, Italy

Theoretical Expectations for the Top Quark Mass
* J.L. LOPEZ, Texas A&M Univ., College Station, USA

RESULTS FROM HIGH ENERGY LABORATORIES

DESY - DES in Electroweak Processes
* B. WIK, DESY, Hamburg, Germany

LEP - High Precision Electroweak Data
* S.C.C. TING, CERN, Geneva, CH and MIT, Cambridge, MA, USA

FNAL - Search for Top, Triangles and Other Effects from New Physics
* J. PEOPLES, FNAL, Batavia, IL, USA

CLOSING LECTURE

* THE GLORIOUS DAYS OF PHYSICS *
* My Life *
* J.M. RAMSEY, Harvard University, Cambridge, MA, USA

Invited Scientists: P.W. HOGES, University of Edinburgh, UK
M. GOUDiN, Université Paris, France
V. KHOLOP, IPN, St. Petersburg, Russia
P. NAfI, CERN, Geneva, Switzerland
M. ROOS, University of Helsinki, Finland

PURPOSE OF THE SCHOOL

The high precision data from LEP and the other experimental results from High Energy Labs, the world over, have given with unpreceded accuracy a picture-perfect agreement between Theory and Experiment. The problem of present-day physics is how to reconcile its successes with the Standard Model with the compelling reasons for the existence of new physics beyond it. In fact there is no question that the ultimate theory in Superstring: the Standard Model being an approximation may yield to the TOE (Theory of Everything).

Purpose of the School is to review and discuss the theoretical and phenomenological aspects of these problems together with the most recent experimental data.

POSTSCRIPT

According to legend, Erice, son of Venus and Neptune, founded a small town on a mountaintop (350 metres above sea level) more than three thousand years ago. The great historian Thucydides (~430 B.C.) said that the Epirots - founders of Erice - were survivors of the destruction of Troy. Ancient historians agreed the city was the oldest city in Europe.

Houses ~1600 BC. The Dorians (~800 B.C.), Carthaginians (~800 B.C.), the Phoenicians (~390 B.C.), the Romans (~200 B.C.), the Byzantines (~390 B.C.), the Saracens (~600 B.C.), the Normans (~900 B.C.), the Arabs (~1000 B.C.) and the Normans (~1100 B.C.) all left marks on the history of Erice. Erice is a mixture of ancient and medieval architecture.

Other municipalities of ancient civilization are to be found in the neighborhood: at Motya (Punic), Segesta (Elymian), and Selinunte (Greeks). On the Aegadian Islands - home of the decisive naval battle of the First Punic War (241 - 240 B.C.) - the ancient city of Segesta and the Italian cities of Erice, Castellammare del Golfo, Trapani, and Palermo are ancient cities.

Spectacular beaches are at San Vito Lo Capo, San Vito, and Consera, and a solid and rocky coast around Messina Catania: all at least one hour's drive from Erice.

APPLICATIONS

Interested candidates should send before June 25, 1994, a letter to the Director of the School:

Professor Antonio ZICCHICHI
CERN, CH-1211 GENEVA 23, Switzerland

specifying:
1) date of birth and present activity;
2) nationality.

Please enclose a letter of recommendation from the group leader or the Director of the Institute or from a senior physicist.

SCHOOL ASSISTANT

The following scholarships have been established in honor of, and named after, the late physicists:

JOHN E. WILSON
ROBERT H. WELLS
PAUL J. KAREL
HERBERT B. KAPLAN
JAMES C. HOMAN
ANDREW S. COCHRANE
GREGORY P. DEWITT
FRANCISCO J. M. KADIR

The scholarships cover registration fees and full board and lodging in Erice. They will be awarded in consultation with the Board of Lockner and Leiden School at the end of the Course, in order to allow a more direct judgment of all applicants.

PLEASE NOTE

Participants must arrive in Erice by July 3, not later than 5 p.m.

A. ZICCHICHI - DIRECTOR