



GALILEO GALILEI FOUNDATION
WORLD FEDERATION OF SCIENTISTS
ETTORE MAJORANA CENTRE FOR SCIENTIFIC CULTURE
INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS
GALILEO GALILEI CELEBRATIONS
Four Hundred Years Since the Birth of
MODERN SCIENCE

INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS

31st Course: FROM SUPERSYMMETRY TO THE ORIGIN OF SPACE-TIME

ERICE-SICILY: 4 - 12 JULY 1993

*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 • Ansaldo •
• Chinese Academy of Sciences • European Physical Society • Italian Ministry of Education •
• Italian Ministry of University and Scientific Research • Sicilian Regional Government • Weizmann Institute of Science

PROGRAMME AND LECTURERS

OPENING LECTURE

Probing the Origin of Space and Time
• J. ELLIS, CERN, Geneva, Switzerland

THEORY AND PHENOMENOLOGY

Status of Electroweak Theory
• P. LANGACKER, Univ. of Pennsylvania, Philadelphia, PA, USA

Status of QCD
• Y. DOKSHITZER, Nuclear Physics Institute, St. Petersburg, Russia

Non-Relativistic Quark Model from QCD and Related Topics
• G. MORPURGO, University of Genoa, Italy

Susy GLTS
• J. LOPEZ, Texas A&M Univ., College Station, TX, USA

Where can Susy Be?
• A. ZICHICHI, CERN, Geneva, Switzerland

Status of Superstrings
• D. GROSS, Princeton University, NJ, USA

Superstring Model Building
• D.V. NANOPOULOS, Texas A&M Univ., Coll. Station, TX, USA

Supergravity Models
• R. ARNOWITT, Texas A&M Univ., College Station, TX, USA

No-scale Supergravity
• A.B. LAHANAS, University of Athens, Greece

SEMINARS ON SPECIALIZED TOPICS

Quark and Lepton Substructure: Issues, Promise and Problems
• R. PECCEI, UCLA, Los Angeles, CA, USA

Beyond the Superstring Scale
• N. MAVROMATOS, CERN, Geneva, Switzerland

Mass of Neutrinos
• G. ALTARELLI, CERN, Geneva, Switzerland

RESULTS

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

Theoretical Implications of LEP Data
• G. ALTARELLI, CERN, Geneva, Switzerland

FNAL
• H. MONTGOMERY, FNAL, Batavia, IL, USA

HERA
• B. WIJK, DESY, Hamburg, Germany

THE GLORIOUS DAYS OF PHYSICS

My First 60 Years
• S.L. GLASHOW, Harvard University, Cambridge, MA, USA

CLOSING LECTURE

• L.B. OKUN, ITEP, Moscow, Russia

Invited Scientists: A. ANSELM, PNPI, St. Petersburg, Russia
M. GOURDIN, Université Pierre et Marie Curie, Paris, France
P.W. HIGGS, University of Edinburgh, UK

PURPOSE OF THE SCHOOL

High Energy Physics has witnessed a remarkable development toward the Theory of Everything (TOE), whose best candidate is Superstring Theory. This development started from Supersymmetry and has now reached the point of putting under experimental test the problem of understanding the Origin of Space-Time. This wide spectrum of unprecedented conceptual developments has its roots in our present knowledge of the Fundamental Forces of Nature. As usual the Subnuclear Physics School will cover the most recent advances in these topics keeping in mind their impact on observable phenomena. A good fraction of the time will therefore be devoted to review the status and prospects of all known gauge forces, including the experimental results on their validity. We remind the participants that the most attractive part of the School are the discussion sessions.

PARTICIPATION
By Invitation only

SCHOLARSHIPS

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

JOBIS S. BELL	PAUL A.M. DIRAC	ISIDOR I. RABI
PATRICK M.S. BLACKETT	ROBERT HOUSTADTER	GIULIO RACAH
JAMES CHADWICK	GUNNAR KALLÉN	ANDREU D. SAKHAROV
AMOS DE-SHALIT	ANDRE LAGARRIGUE	JUN J. SAKURAI

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

PLEASE NOTE

Participants must arrive in Erice on July 4, not later than 5 p.m.

POETIC TOUCH

According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago. The great historian Thucydides (~500 B.C.) said that the Elymi - founders of Erice - were survivors of the destruction of Troy. Ancient historians agreed that Erice was the oldest city in Europe.

Homer (~1000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Virgil (~50 B.C.), Horace (~20 B.C.), and others have celebrated this magnificent spot in Sicily in their poems. In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is a mixture of ancient and medieval architecture.

Other masterpieces of ancient civilization are to be found in the neighbourhood: at Motya (Phoenician), Segesta (Elymian), and Selinunte (Greek). On the Aegadian Islands - theatre of the decisive naval battle of the first Punic War (264-241 B.C.) - suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo.

Splendid beaches are at San Vito Lo Capo, Scopello, and Corino, and a wild and rocky coast around Monte Cofano: all at less than one hour's drive from Erice.