

INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS

24th Course: THE SUPER-WORLD

ERICE - TRAPANI - SICILY: 7 - 15 AUGUST 1986

Sponsored by the:

- 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

- J. SCHWINGER, UCLA, CA, USA

THEORY OF THE SUPER-WORLD

Supergravity

- P. VAN NIEUWENHUIZEN, SUNY, Stony Brook, NY, USA

Superstrings from supergravity

- S. FERRARA, CERN, Geneva, CH and UCLA, CA, USA

Heterotic superstrings

- D.J. GROSS, Princeton University, Princeton, NJ, USA

Gauge and gravitational anomalies

- L. ALVAREZ-GAUME, Harvard University, Cambridge, MA, USA

PHENOMENOLOGY OF THE SUPER-WORLD

Limits on non-standard phenomena and their implications.

- A. ALI, DESY, Hamburg, FRG

Sparticles

- P. FAYET, Ecole Normale Supérieure, Paris, France

Proton decay in the super-world

- S. RABY, Los Alamos National Laboratory, Los Alamos, NM, USA

Heterotic superstrings

- M. DINE, City College, New York, NY, USA

STARTUP OF THE SUPER-WORLD

Physics at the ($\bar{p}p$) colliders (CERN and FNL)

- C. RUBBIA, CERN, Geneva, Switzerland

Physics at the (e^+e^-) colliders

- S.C.C. TING, MIT, Cambridge, MA, USA

Hadron physics at extreme energies

- G. EKSPONG, University of Stockholm, Sweden

IN THE HEART OF THE SUPER-WORLD

The Eloisatron project

- A. ZICHICHI, CERN, Geneva, Switzerland

THE GLORIOUS DAYS OF PHYSICS

The discovery of the symmetry operators: P and T

- E.P. WIGNER, Princeton University, Princeton, NJ, USA

CLOSING LECTURE

- S.L. GLASHOW, Harvard University, Cambridge, MA, USA

PURPOSE OF THE SCHOOL

To review the status of the most significant theoretical and experimental results in the exciting field of the new world: the Super-one.

Participation by invitation only

POETIC TOUCH

According to legend, Erice, son of Venus, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago.

Homer (~1,000 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. Among the sights there, the Castle of Venus and the Cyclopean Walls can be admired. Other masterpieces of ancient Greek civilization, such as Motya, Segesta, and Selinunte, are to be found in the neighbourhood. On the Aegadian Islands, which can be reached by cable car plus hydrofoil boat in about two hours, there are prehistoric murals in the famous grotto of Levanzo, the Grotte Marine of Marettimo, and the recently discovered paleolithic grottoes of Favignana. There are splendid beaches, the farthest about 40 minutes' drive from Erice, at San Vito Lo Capo, Scopello, and Cornino, and wild beaches around Monte Cofano.

SPECIAL SCHOLARSHIPS

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

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|-----------------------|-----------------|-----------------|
| PATRICK M.S. BLACKETT | JAMES CHADWICK | AMOS DE-SHALIT |
| PAUL A.M. DIRAC | V. JURGO GLASER | GUNNAR KÄLLEN |
| ANDRÉ LAGARRIGUE | GIULIO RACAH | J. JOHN SAKURAI |

These scholarships cover registration fees and full board and lodging in Erice.

• **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.

Participants must be in Erice on August 7, not later than 5 p.m.

A. ZICHICHI - DIRECTOR

Special Announcement

Information about the Schools and the activities of the CENTRE can be found in the official Journal of the CENTRE:



Progress in Scientific Culture

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