

INTERNATIONAL SCHOOL OF PHYSICS

«ETTORE MAJORANA»

Sponsored by : CERN - European Organization for Nuclear Research
MPI - Italian Ministry of Public Education
NATO - North Atlantic Treaty Organization

Place : Erice (Trapani) Sicily

Period : 27 September - 10 October 1965

Subject : "STRUCTURE OF ELEMENTARY PARTICLES"

PROGRAMME

I. MORNING LECTURES

1. Introduction to Higher Symmetries (aces and quarks; general methods for dealing with unitary groups).
2. Consequences of SU_6 and Other Symmetries in Weak, Electromagnetic, and Strong Interactions (leptonic and non-leptonic decays of hadrons; cross-sections at high energy; nucleon-antinucleon annihilation; electromagnetic decays of vector mesons; electromagnetic form factors).
3. Relativistic SU_6 and Related Topics
4. Symmetry Breaking (octet dominance, bootstraps; strong and electromagnetic mass differences).
5. Are the Higher Symmetries of Dynamical Origin? (commutation of currents).
6. The More Fundamental Symmetries and their Experimental Status (C, P, T, CP, PT, TC, PCT, Lorentz invariance, baryon conservation; lepton conservation).

II. AFTERNOON DISCUSSIONS

III. SEMINARS ON EXPERIMENTAL TOPICS

LECTURERS

J. S. Bell, CERN, Geneva, Switzerland.
N. Cabibbo, CERN, Geneva, Switzerland.
P. Franzini, Columbia University, New York, N.Y., U.S.A.
R. Gatto, University of Florence, Florence, Italy.
A. Pais, Rockefeller Institute, New York, N.Y., U.S.A.

J. Prentki, CERN, and Collège de France, Paris, France.
G. Puppi, University of Bologna, Bologna, Italy.
J. Steinberger, CERN, and Columbia University,
New York, N.Y., U.S.A.
V. F. Weisskopf, CERN, Geneva, Switzerland.

PURPOSE OF THE SCHOOL

The school is devoted to those physicists who are interested in having a much deeper theoretical understanding of the field of physics in which they are working. The students will be selected from amongst applicants according to their scientific qualifications. In this selection the geographical distribution of the students will be taken into account.

In order to exploit to the fullest extent the material presented at the school, we will have only three lectures per day, all given in the morning (each lecture will last 1 hour). Two hours of the afternoon will be dedicated to clearing up in free, informal discussions the topics of the morning lectures.

POETIC TOUCH

Legend tells that Erice, son of Venus, was the founder, more than three thousand years ago, of a small town on top of a mountain (750 metres above sea level).

Homer (~1,000 B.C.), Theocritus (~300 B.C.), Polybius (~200 B.C.), Horace (~70 B.C.), Virgil (~20 B.C.), and others, have celebrated in their poems this magnificent spot in Sicily. There you can admire among other beauties the Castle of Venus and the Cyclopean Walls. Other masterpieces of ancient Greek civilization are found in the neighbourhood, such as Motya, Segesta and Selinunte. The "Grotte Marine" of the Aegadian Islands can be reached by cable-car and flying boat in about an hour.

GENERAL INFORMATION

Persons wishing to attend this course should apply to:

Mrs. M. Bell,
CERN - European Organization for Nuclear Research,
1211 Genève 23,
Switzerland.

They should specify:

- i) date and place of birth
- ii) degree and other academic qualifications
- iii) list of publications
- iv) present position and place of work

and include v) a letter of recommendation from their research group leader or from a professor of physics.

The total fee, including full board and lodging (arranged by the school), to be paid by each student will be approximately 650 Swiss francs. Application should be made as soon as possible by letter -- no special application form is required.

Closing date for applications: 10 July 1965

A letter will be sent to the successful applicants on 10 July. Those students who, because of possible difficulties with travel documentation, would like to know before 10 July whether their application has been accepted, may obtain an earlier special decision upon submitting a justified request.

Admission to the school will be decided by a commission composed of: Prof. G. Bernardini, President of the Scientific Committee of the School, Prof. V. F. Weisskopf, Director-General of CERN, and the Director of the School.

All students must be in Erice on 27 September not later than 5 p.m. More detailed information, including the timetable of the lectures, will be sent to the successful applicants together with the acceptance letter.

A. ZICHICH
DIRECTOR OF THE SCHOOL