

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 : Eryx (Erice), Sicily.

Period : 27 August - 7 September 1964.

Subject : "SYMMETRIES IN ELEMENTARY PARTICLE PHYSICS"

PROGRAMME

I. MORNING LECTURES

THEORETICAL FOUNDATIONS

(Lorentz invariance - Parity - Charge conjugation - Time reversal - PCT. General notions on all quantum numbers needed to specify resonances and elementary particle states - their relations to symmetry operations.)

PHENOMENOLOGY OF RESONANCES

(Dalitz plots, methods of assigning spin and parities, etc.)

ELEMENTARY PARTICLES AND RESONANCES FROM THE UNITARY-SYMMETRIES POINT OF VIEW: SU_3 AND SU_4

CONSEQUENCES OF SU_3 SYMMETRY IN WEAK INTERACTIONS

ARE NUCLEONS REALLY INDIVISIBLE?

(A possible origin of SU_3 Symmetry and its Breaking: Aces and Quarks.)

IS ASTROPHYSICS GOING TO TEACH US SOMETHING NEW ABOUT ELEMENTARY PARTICLES?

II. AFTERNOON WORKING SESSIONS, led by

III. PRESENT STATUS OF STRONG, ELECTROMAGNETIC, AND WEAK INTERACTIONS - Closing lecture

Lecturer

P. K. Kabir, CERN, Geneva, Switzerland.

N. Cabibbo, Lawrence Radiation Laboratory, Berkeley, California, U. S. A.

S. M. Berman, Linear Accelerator Center, Stanford, California, U. S. A.

R. P. Feynman, California Institute of Technology, Pasadena, California, U. S. A.

G. Zweig, California Institute of Technology, Pasadena, California, U. S. A.

N. Cabibbo, Lawrence Radiation Laboratory, Berkeley, California, U. S. A.

R. P. Feynman, California Institute of Technology, Pasadena, California, U. S. A.

R. P. Feynman, California Institute of Technology, Pasadena, California, U. S. A.

GENERAL INFORMATION

Persons wishing to attend this course should apply to:

The Director of the School, Nino ZICHICH,
CERN - European Organization for Nuclear Research,
Genève 23,
Switzerland.

They should specify:

- date and place of birth
- degree and other academical qualifications
- list of publications
- present position and place of work
- a letter of recommendation from their research group leader or from a professor of physics.

and include

The total fee, including full board and lodging (arranged by the school), to be paid by each student amounts to 60,000 Italian lire.

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. The difficult task of leading and guiding the informal discussions will be taken over by Professor R. P. Feynman.

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.

Closing date for applications: 10 July 1964

Successful applicants will be informed by cable on 15 July. Those students who, because of possible difficulties with travel documentation, would like to know before 15 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 TRAPANI on 26 August, either at the railway station, or at the airport, or at the port. From these three places transportation to Erice will be provided by the School.

A. ZICHICH
DIRECTOR OF THE SCHOOL