

**INTERNATIONAL SCHOOL OF PHYSICS**

**ERICE - TRAPANI - SICILY: 1-19 JULY 1970**

**Sponsored by: ERS - Regional Sicilian Government  
MPI - Italian Ministry of Public Education  
MRST - Italian Ministry of Scientific and Technological Research  
NATO - North Atlantic Treaty Organization  
The Weizmann Institute of Science**

**Subject: ELEMENTARY PROCESSES AT HIGH ENERGY**

**LECTURERS AND PROGRAMME**

**OPENING LECTURE**

- « *Some fundamental problems in Physics* »  
V. F. WEISSKOPF, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.

**THEORETICAL LECTURES**

- « *Rigorous Results from Field Theory and Unitarity* »  
A. MARTIN, CERN, Geneva, Switzerland
- « *Divergence Difficulties in Physics* »  
T. D. LEE, Columbia University, Irvington-on-Hudson, N. Y., U.S.A.
- « *Narrow Resonance Models compatible with Duality and their Developments* »  
G. VENEZIANO, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.
- « *Duality and Hadron Dynamics* » (Theoretical and phenomenological aspects of Duality; Duality and Quarks; Regge poles and cuts in strong and electromagnetic interactions)  
H. HARARI, The Weizmann Institute of Science, Rehovoth, Israel

**REVIEW LECTURES**

- « *Why is gravitation fascinating?* »  
W. THIRRING, CERN, Geneva, Switzerland
- « *Weak Interactions* »  
T. D. LEE, Columbia University, Irvington-on-Hudson, N.Y., U.S.A.
- « *Electromagnetic Production of Hadronic Resonances* »  
G. SALVINI, University of Rome, Italy
- « *Problems in Meson Spectroscopy* » (Fine structure; anomalous fine structure; mesons heavier than two nucleons; direct channel resonances)  
B. MAGLIC, Rutgers University, New Brunswick, N. J., U.S.A.
- « *Strong Interactions: Elastic and Inelastic Processes* »  
D. R. O. MORRISON, CERN, Geneva, Switzerland

**THE FUTURE OF HIGH ENERGY PHYSICS**

- « *Status of the European Project* »  
J. B. ADAMS, CERN, Geneva, Switzerland
- « *Status of the American Project* »  
R. R. WILSON, National Accelerator Laboratory, Batavia, Illinois, U.S.A.

**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 emphasis of the programme will be on the elucidation and discussion of the progress achieved in the theoretical and experimental understanding of particle physics during the last year. Students will be selected from the 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, three lectures will be given in the morning and at least two hours of the afternoon will be dedicated to clearing up in free, informal discussions, the topics of the morning lectures. Seminars will be given in afternoon or evening sessions.

**SPECIAL SCHOLARSHIPS**

Three special Scholarships have been established in honour of and named after the late Physicists

**AMOS DE-SHALIT      GUNNAR KÄLLEN      GIULIO RACAH**

They will be awarded, according to the scientific qualifications and financial needs of the applicants, by the Selection Board of the School. These Scholarships cover travel expenses, registration fees, and full board and lodging in Erice. Applicants should specify if they wish to be considered as candidates for these Scholarships.

**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 (~ 1000 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. Other masterpieces of ancient Greek civilization are found in the neighbourhood, such as Motya, Segesta and Selinunte. The « Grotte Marine » and the Aegadian Islands can be reached by cable-car and flying boat in about two hours.

**Please note:**

We regret that, owing to the limited number of places available in the lecture hall, it will not be possible to allow any person not selected by the Committee of the School to follow the courses.

NSF travel grants are restricted to U.S.A. citizens. Applications for these should be made as soon as possible through the Director of the School.

Enquiries for publications of previous courses:  
ACADEMIC PRESS, Inc., 111 Fifth Avenue, New York, N. Y. 1003, U.S.A.

**SEMINARS ON SPECIALIZED TOPICS**

- « *Experimental programme at the Dubna Laboratory* »  
A. M. BALDIN, Joint Institute for Nuclear Research, Moscow, U.S.S.R.
- « *Status of the Large Hydrogen Bubble Chamber: Mirabelle* »  
A. BERTHELOT, Commissariat à l'Energie Atomique, Paris, France
- « *Model for Deep Inelastic Lepton-Hadron Scattering* »  
R. BRANDT, The Rockefeller University, New York, U.S.A.
- « *A new Energy-Momentum Tensor* »  
S. COLEMAN, Harvard University, Cambridge, Mass., U.S.A.
- « *New Developments in Current Algebra* »  
V. DE ALFARO, University of Turin, Italy
- « *Selection Rules for Leptons* »  
B. PONTECORVO, Joint Institute for Nuclear Research, Moscow, U.S.S.R.
- « *A dynamical approach to the Quark Model* »  
G. PREPARATA, The Rockefeller University, New York, U.S.A.
- « *Status and perspectives of the Frascati Laboratories* »  
R. QUERZOLI, Frascati National Laboratories, Frascati, Italy
- « *( $\pi\pi$ ) and ( $K\pi$ ) Phase Shifts* »  
P. SCHLEIN, University of California, Los Angeles, U.S.A.
- « *Deep Inelastic Behaviour and Hadronic Collisions* »  
A. ZICHICHI, University of Bologna, Italy

**CLOSING LECTURE**

- « *Present Status of Particle Physics* »  
T. D. LEE, Columbia University, Irvington-on-Hudson, N. Y., U.S.A.

**THE GLORIOUS DAYS OF PHYSICS**

- « *My life as a Physicist* »  
ISIDOR ISAAC RABI
- « *My life as a Physicist's wife* »  
ELLEN WEISSKOPF

**GENERAL INFORMATION**

Persons wishing to attend the Course should write to:

The Secretary of the School: Prof. Giuliano PREPARATA  
The Rockefeller University  
New York, N. Y. 10021, U.S.A.

They should specify:

- i) date and place of birth together with their present nationality;
- 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), is 700 Swiss francs. Thanks to the generosity of the sponsoring Institutions, partial support can be given to some deserving students, who need financial help. This must be specified and justified in the application letter. This form of financial support will be given 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.

Closing date for application: 1st May 1970

No special application-form is required

A letter will be sent to successful applicants by May 15. Students having difficulties with travel documentation and who need to know before May 15 whether or not their applications have been accepted, may get an earlier special decision by submitting a justified request.

Admission to the School will be decided by a committee consisting of Professors: J. S. Bell, G. Bernardini, N. Cabibbo, M. Gell-Mann, T. D. Lee, L. A. Radicati, V. F. Weisskopf and A. Zichichi.

Students must be in Erice on July 1 not later than 5 p.m. More detailed information, including the timetable of the lectures, will be sent to successful applicants together with the acceptance letter.

**THE DIRECTOR  
A. ZICHICHI**