

INTERNATIONAL SCHOOL OF SUBNUCLEAR PHYSICS

ERICE - TRAPANI - SICILY: 7 - 29 JULY 1972

**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**

X Course on: HIGH-LIGHTS IN PARTICLE PHYSICS

LECTURERS AND PROGRAMME

OPENING LECTURE

« *Some Reflections on Theoretical Hadron Physics, Past Achievements and Future Tasks* ».
 L. VAN HOVE, CERN, Geneva, Switzerland.

THEORETICAL LECTURES

« *Progress in Field Theory and Axiomatics* ».
 K. HEPP, E.T.H., Zürich, Switzerland.
 « *Regge Poles and Duality* ».
 R. J. N. PHILLIPS, The Rutherford High Energy Laboratory, Chilton, U.K.
 « *Current Algebra and Chiral Symmetries* ».
 Y. NAMBU, The Enrico Fermi Institute, Chicago, Illinois, U.S.A.
 « *Bound State Models of the Proton* ».
 S. D. DRELL, Linear Accelerator Center, Stanford, California, U.S.A.
 « *Light-Cone Physics - Foundations* ».
 R. BRANDT, New York University, New York, U.S.A.
 « *Light-Cone Physics - Recent Developments* ».
 G. PREPARATA, University of Rome, Rome, Italy.

SEMINARS ON SPECIALIZED TOPICS

U. AMALDI, CERN, Geneva, Switzerland.
 G. BARBIELLINI, Laboratori Nazionali, Frascati, Italy.
 F. BUCCELLA, University of Rome, Rome, Italy.
 J. BALLAM, Linear Accelerator Center, Stanford, California, U.S.A.
 B. FERRETTI, University of Bologna, Bologna, Italy.
 S. FUBINI, Massachusetts Institute of Technology, Cambridge, Mass., U.S.A.
 M. GELL-MANN, California Institute of Technology, Pasadena, Calif., U.S.A.
 W. FENTSCHKE, CERN, Geneva, Switzerland.
 T. D. LEE, Columbia University, New York, U.S.A.
 Y. NE'EMAN, Tel Aviv University, Ramat-Aviv, Israel.
 R. RODENBERG, Physikalisches Institut der Universität, Aachen, Germany.
 V. L. TELEGI, University of Chicago, Chicago, Illinois, U.S.A.
 G. VENTURI, University of Bologna, Bologna, Italy.
 B. ZUMINO, CERN, Geneva, Switzerland.

REVIEW LECTURES

« *Weak Interactions and CP Violation* ».
 K. WINTER, CERN, Geneva, Switzerland.
 « *Electromagnetic Interactions of Hadrons* ».
 E. LOHRMANN, D.E.S.Y., Hamburg, Federal Republic of Germany.
 « *Electromagnetic Interactions of Leptons* ».
 F. J. M. FARLEY, Royal Military College of Science, Shrivenham, U.K.
 « *Strong Interactions - $\pi\pi$ and $K\pi$* ».
 M. FROISSART, CEN-SACLAY, Gif-sur-Yvette, France.
 « *Strong Interactions - Antiproton Physics* ».
 H. MUIRHEAD, University of Liverpool, Liverpool, U.K.
 « *Strong Interactions - Baryon Resonances* ».
 R. A. SALMERON, Ecole Polytechnique, Paris, France.
 « *Strong Interactions - Meson Resonances* ».
 M. CRESTI, University of Padua, Padua, Italy.
 « *Strong Interactions - High Energy Phenomena* ».
 L. VAN HOVE, CERN, Geneva, Switzerland.
 « *Physics with Colliding Beams of Leptons* ».
 N. CABIBBO, University of Rome, Rome, Italy.
 « *Physics with Colliding Beams of Hadrons* ».
 J. C. SENS, Foundation for Fundamental Research on Matter, The Netherlands.
 « *Top Energy Hadronic Collisions using Cosmic Rays* ».
 L. W. JONES, University of Michigan, Ann Arbor, Michigan, U.S.A.
 « *Status Report of the 300 GeV ECFA Study Group* ».
 I. MANNELLI, University of Pisa, Pisa, Italy.

CLOSING LECTURE

« *Summary of the Course - What I Have Learned* ».
 E. P. WIGNER, Princeton University, Princeton, New Jersey, U.S.A.

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<u>THE FUTURE OF HIGH ENERGY PHYSICS</u>	<u>A ROUND TABLE DISCUSSION</u>	<u>THE GLORIOUS DAYS OF PHYSICS</u>
« <i>Status of the European Project</i> ». J. B. ADAMS, CERN, Geneva, Switzerland.	* « <i>Why Science Today</i> » *	« <i>My Life as a Physicist</i> »
« <i>Status of the American Project</i> ». R. R. WILSON, Batavia, Illinois, U.S.A.	* Introductory Speaker: ISIDOR ISAAC RABI *	EUGENE P. WIGNER
« <i>What possibilities exist for Further Important Steps in Energy?</i> ». K. JOHNSEN, CERN, Geneva, Switzerland.	* Columbia University, New York, U.S.A. *	Princeton University, Princeton, New Jersey, U.S.A.
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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.

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.), Virgilius (~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 Moysa, Segesta and Selinunte. In the Aegean Islands (which can be reached by cable car plus hydrofoil boat in about two hours) there are: — prehistoric mural figures in the famous grotto of Levanzo — the Grotte Marine of Marettimo — the recently discovered paleolithic grottoes of Favignana. Finally, splendid beaches (the farthest one at about 40 minutes driving from Erice) are those of San Vito Lo Capo, Scopello, Cornino and the wild ones around Monte Cofano.

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 publication of the proceedings:
 EDITRICE COMPOSITORI, Viale XII Giugno 1, 40124 Bologna, Italy.

GENERAL INFORMATION

Persons wishing to attend the Course should write to the Secretary of the School: Miss Maria ZAINI - 1211 Genève 23, Switzerland.
 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 subscription fee is 1,000 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.
 — SPECIAL SCHOLARSHIPS —
 Three special Scholarships have been established in honour of and named after the late Physicists
AMOS DESHALIT **GÜNNAR KÄLLEN** **GIULIO RACAH**
 These Scholarships cover travel expenses, registration fees, and full board and lodging in Erice.
 Scholarships as well as any other form of financial support will be attributed 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: April 5, 1972
No special application-form is required

A letter will be sent to successful applicants by April 29. Students having difficulties with travel documentation and who need to know before April 29 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: G. Bernardini, N. Cabibbo, R. H. Dalitz, M. Gell-Mann, T. D. Lee, A. Martin, L. A. Radicati, V. F. Weisskopf and A. Zichichi.
 Students must be in Erice on July 7 no 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.