



«ETTORE MAJORANA» FOUNDATION AND CENTRE FOR SCIENTIFIC CULTURE
TO PAY A PERMANENT TRIBUTE TO GALILEO GALILEI, FOUNDER OF MODERN SCIENCE
AND TO ENRICO FERMI, THE "ITALIAN NAVIGATOR", FATHER OF THE WEAK FORCES



INTERNATIONAL SCHOOL OF NUCLEAR PHYSICS

38th Course: NUCLEAR MATTER UNDER EXTREME CONDITIONS - RELATIVISTIC HEAVY-ION COLLISIONS

ERICE-SICILY: 16 – 24 SEPTEMBER 2016

Sponsored by the: • European Physical Society • Extreme Matter Institute EMMI • GSI Helmholtzzentrum für Schwerionenforschung
• Helmholtz International Center for FAIR • Helmholtz Center Mainz •
• Italian Ministry of University and Research • Sicilian Regional Government

TOPICS AND LECTURERS

Lattice QCD at nonzero baryon density

• G. AARTS, Swansea University, UK

Determining the QCD matter shear viscosity in ultrarelativistic A+A collisions

• K. ESKOLA, University of Jyväskylä, FI

Outstanding results from the PHENIX experiment at RHIC

• A.D. FRAWLEY, Florida State University, Tallahassee, FL, US

Chiral criticality

• B. FRIMAN, GSI, Darmstadt, DE

Extreme matter in strong external electromagnetic fields

• K. FUKUSHIMA, University of Tokyo, JP

Exploring baryon rich matter with virtual photons

• T. GALATYUK, Technische Universität Darmstadt, DE

Thermal photons

• C. GALE, McGill University, Montreal, CA

Dilepton measurements at RHIC

• F. GEURTS, Rice University, Houston, TX, US

p-A collisions at ultrarelativistic energies

• J. HARRIS, Yale University, New Haven, CT, US

Spectral and transport properties of the QGP

• O. KACZMAREK, University of Bielefeld, DE

Towards jet physics at sPHENIX and LHC in the 2020's

• G.M. ROLAND, MIT, Cambridge, MA, US

Recent results from ALICE

• R. SNELLINGS, Utrecht University, NL

Summary talk

• Nu XU, LBNL Berkeley, CA, US, and CCNU, Wuhan, CN

PURPOSE OF THE COURSE

The program concentrates on the following topics: Phases of strong-interaction matter, Collective dynamics of heavy-ion collisions, Transport properties of QCD matter, RHIC low-energy scan, Results from the LHC experiments, Initial conditions at ultrarelativistic energies, Quarkonia production at the highest beam energies, Jets and high p_T physics, Electromagnetic signals, Fluctuations and criticality, pp and pA collisions, Heavy-ion collisions at high baryon densities.

APPLICATIONS

Persons wishing to attend the Course should register online at:
<http://theorie.ikp.physik.tu-darmstadt.de/erice/> or <http://www.uni-tuebingen.de/erice/>
or apply in writing to:

- Professor Dr Amand FAESSLER
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Tel +49.7071.2976370 – Fax +49.7071.295388
e-mail: erice@physik.tu-darmstadt.de
- Professor Jochen WAMBACH
Institut Kernphysik
Technische Universität Darmstadt
Schlossgartenstrasse 2 – D-64289 Darmstadt, Germany
e-mail: erice@physik.tu-darmstadt.de
- Professor Michael BUBALLA
Institut Kernphysik
Technische Universität Darmstadt
Schlossgartenstrasse 2 – D-64289 Darmstadt, Germany
e-mail: erice@physik.tu-darmstadt.de

They should specify:

- i) date and place of birth together with present nationality;
- ii) degree and other academic qualifications;
- iii) present position and place of work;
- iv) postal and e-mail address.

Further information on the school and application forms for fellowships can be found at the same web address.

POETIC TOUCH

According to legend, Erice, son of Venus and Neptune, founded a small town on top of a mountain (750 metres above sea level) more than three thousand years ago. The founder of modern history — i.e. the recording of events in a methodic and chronological sequence as they really happened without reference to mythical causes — the great Thucydides (~500 B.C.), writing about events connected with the conquest of Troy (1183 B.C.) said: «After the fall of Troy some Trojans on their escape from the Achaei arrived in Sicily by boat and as they settled near the border with the Sicanians all together they were named Elymi: their towns were Segesta and Erice.» This inspired Virgil to describe the arrival of the Trojan royal family in Erice and the burial of Anchises, by his son Aeneas, on the coast below Erice. Homer (~1000 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. During seven centuries (XIII-XIX) the town of Erice was under the leadership of a local oligarchy, whose wisdom assured a long period of cultural development and economic prosperity which in turn gave rise to the many churches, monasteries and private palaces which you see today.

In Erice you can admire the Castle of Venus, the Cyclopean Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and medieval architecture. Other masterpieces of ancient civilization are to be found in the neighbourhood: at Motya (Phoenician), Segesta (Elymian), and Selinunte (Greek). On the Aegadian Islands — theatre of the decisive naval battle of the first Punic War (264-241 B.C.) — suggestive neolithic and paleolithic vestiges are still visible: the grottoes of Favignana, the carvings and murals of Levanzo.

Splendid beaches are to be found at San Vito Lo Capo, Scopello, and Cornino, and a wild and rocky coast around Monte Cofano: all at less than one hour's drive from Erice.

More information about the «Ettore Majorana» Foundation and Centre for Scientific Culture can be found on the WWW at the following address:
<http://www.ccsem.infn.it>

PLEASE NOTE

Participants must arrive on September 16, not later than 7 pm.