

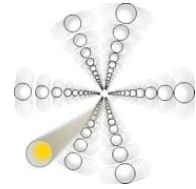


INFN ELOISATRON PROJECT

51st Workshop: "Channeling 2008"

Charged and Neutral Particles Channeling Phenomena

Erice (Trapani) Italy, 25 October - 1 November 2008



A. ZICHICHI: Director of the Project

S.B. DABAGOV and L. PALUMBO: Directors of the Workshop

"Channeling 2008"

Charged and Neutral Particles Channeling Phenomena

October 25 - November 1, 2008 Erice (Trapani - Sicily), Italy

(<http://www.lnf.infn.it/conference/channeling2008>)

organized by

Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali di Frascati

in cooperation with

HADRON PHYSICS I3 - EU Project

CARE HHH - CERN, Switzerland

LPI RAS - P.N. Lebedev Physical Institute RAS, Russia

The "Channeling" (International Conference on Charged and Neutral Particles Channeling Phenomena) series are the conferences devoted to new developments in the field of coherent and incoherent scattering of hadrons and leptons (protons, ions, electrons, muons and related antiparticles) in solid structures of various periodicities from the viewpoint of both fundamental studies and applications. The first meetings of the series: "Channeling 2004" and "Channeling 2006" - were organized by the National Institute for Nuclear Physics (INFN) at the National Laboratories of Frascati (LNF). The proceedings of the conferences were issued by SPIE, the International Society for Optical Engineering (Proc. of SPIE, Vol. 5974 and Vol. 6634) and includes the reports to the conferences. The 3rd conference of the series - "Channeling 2008" – will be organized within the INFN ELOISATRON project as the 51st Workshop.

The main scope of the workshop is to attract the attention of researches from many world laboratories specializing in accelerator physics, radiation and nuclear physics, materials science, biology and medicine to the studies on both the passage of charged relativistic particles through strong periodic fields and electromagnetic radiation accompanying it, and new technological solutions for radiation handling in order to deliver the intense photon beams of coherent radiation.

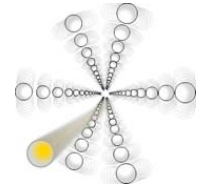
The workshop represents a unique opportunity for the wide interdisciplinary community to gain information about current and future researches in the field of coherent/incoherent scattering of charged and neutral beams in various media. In particular it is of great interest for young scientists wishing to undertake new investigations following the foreseen development of the next generation brilliant photon sources, as well as an important opportunity for exploring and discussing new international initiatives in radiation science.

The workshop program will include invited lectures, oral and poster presentations. Sufficient time for informal discussions will be allocated.

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TOPICS

- Coherent scattering of relativistic charged particles in matter
- Radiation of relativistic charged particles in periodic structures (coherent bremsstrahlung, channeling radiation, resonant transition radiation, diffraction radiation, parametric x-ray radiation, LPM effect)
- Crystal channeling, volume capture and crystal reflection of positive ions: theory and experiments; crystal assisted collimation in hadron colliders
- Channeling of radiations in capillary systems (micro- and nano-channeling, nanotubes, nanoporous)
- Novel powerful radiation sources (FEL, Thomson scattering, laser plasma acceleration)
- Applications of channeling phenomena (bending of the beams, positron sources, x-ray waveguides, capillary/polycapillary optics, novel x-ray table-top instruments)

ADVISORY BOARD

V.L. Ginzburg (LPI RAS, Moscow)
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W. Wagner (RC Rossendorf, Dresden)
Zhiyuan Zhu (SIAP, Shanghai)

PROGRAMME COMMITTEE

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ORGANIZING COMMITTEE

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M. Ferrario (LNF INFN)
D. Giulietti (Pisa INFN)
D. Hampai (LNF INFN)
L. Quintieri (LNF INFN)

PROGRAM & ABSTRACTS & PROCEEDINGS

The scientific program of the workshop will include invited presentations by the experts in the field of the “Channeling 2008” topics, selected oral presentations, and poster sessions.

Participants are invited to register by filling in the online Registration Form (please, visit the official workshop web site: <http://www.lnf.infn.it/conference/channeling2008>)

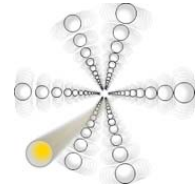
The author/s is/are requested to submit an abstract of his/their contribution in English **not later July 15** via e-mail channeling2008@lnf.infn.it .

Authors are kindly required to follow *the guidelines for Abstracts of Oral or Poster*

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Contributions (in [doc](#), [LaTeX](#), or [pdf](#) formats, the templates can be downloaded via the workshop web site). Please save and submit the abstract under your family name typed in small letters, e.g. **abstract_smith**.*** submitted by Dr. Smith.

Abstracts of all accepted papers (both oral and poster) will be published in the Advanced Program and distributed to all participants at registration. Post deadline abstracts will not be published.

World Scientific in the “Science and Culture Series” will publish the proceedings of the workshop. Speakers are therefore expected to provide a written version of their contributions. As regards typing instructions, the style file referring to the appropriate trim size (9 x 6 inches) can be downloaded from the web:

http://www.wspc.com.sg/style/proceedings_style.shtml

Further details will be given in due time.

Fee & Accommodation

The “E. Majorana” Centre will provide accommodation for participants either in its living quarters or in the Erice hotels. All reservations will be made by the “E. Majorana” Centre.

Please duly fill and return as soon as possible the attached reservation form. The deadline for lodging reservation is **September 25, 2008**.

FEES

The overall fees contribution is 100 Euro/day (*). This contribution includes: full board and lodging, local transportation and facilities, excursion and party, and a copy of the Workshop proceedings.

(*) **Payments** can be made
either **in Erice upon registration** -

- i) in **cash** (Euro, US \$ or CHF);
- ii) with **travellers cheques**;

or, **in advance**, -

- iii) by **bank transfer** to the following account:

FEMCCS

Banco di Sicilia – Agenzia di Erice – 91016 Erice (Trapani), Italy

Account number: 13358

Bank code: ABI 1020 – CAB 81850 – CIN T

IBAN: IT08T0102081850 0000000 13358

BIC and SWIFT: BSICITRTPN

Reference: ELOISATRON – 51st Workshop: Channeling 2008

NB: The Workshop starts on Sunday, October 26 and ends on Friday, October 31.

One day will be free for excursion; a full day excursion and a dinner party will be organized during the Workshop.

You are expected to arrive in Erice on Saturday, October 25 and to leave on Saturday, November 1.

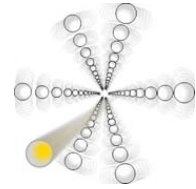


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LODGING

The “E. Majorana” Centre provides single or double room accommodation in the living quarters of the three Institutes (“Rabi” Institute-San Rocco, “Wigner” Institute-San Domenico and “Blackett” Institute-San Francesco). Depending on the number of participants, accommodation can be also provided in various Erice hotels selected by the “E. Majorana” Centre.

The single/double room option should be specified in the reservation form (see below).

MEALS

- Breakfast is provided daily at the “Rabi” Institute-San Rocco (from about 7:30 to 9:30 a.m.). Of course it is also provided in the Erice hotels.
- Coffee, tea and snacks are available at the lecture halls later in the day, at coffee breaks, and in San Rocco, around the clock.
- For lunch and dinner, a choice of meals is arranged at a few local restaurants selected by the “E. Majorana” Centre. You sign for your meal, but pay for your own beverages. Service is included in the price of the meal.

LOCAL TRANSPORTATION

A transportation by bus or car from/to the airport (railway station, harbour) to/from Erice, on arrival/departure day, is provided by the “E. Majorana” Centre. The drive to Erice takes about one hour.

The exact information concerning arrival and departure should be provided in time to the “E. Majorana” Centre Secretariat.

EXCURSION AND PARTY

A full day excursion and a dinner party will be organized during the Workshop.

FACILITIES

Different facilities are available for all participants:

- basic stationery, fax and xerocopy services;
- computers, printers and network connections.

Temporary accounts for participants can be obtained upon request at the “E. Majorana” Centre Secretariat.

Important dates

Abstract submission	before July 15 , 2008
Manuscript submission	before October 31 , 2008
Pre-registration & Hotel reservation	before September 25 , 2008

How to get to Erice

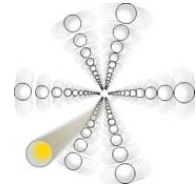
- By road, there are two possibilities:
 - 1) drive along the Autostrada del Sole via Milan-Bologna-Florence-Rome-Naples-Villa San



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Giovanni (Reggio Calabria), then take a ferry-boat from Villa San Giovanni to Messina and drive on to Erice (350 Km from Messina).

2) take the ferryboat either from Genoa or from Naples to Palermo and then drive on to Erice (100 Km from Palermo); the places on the ferryboat should be booked in advance.

- **By train:** via Milan-Rome, you can reach Palermo or Trapani directly.
- **By air:** the best way to reach Erice is by plane, landing either in Palermo airport (or in Trapani) airport. If you are coming by airplane, please notice that luggage checked through to Palermo (or Trapani) goes through customs there.

Correspondence

AT LNF:

“Channeling 2008”

INFN - Laboratori Nazionali di Frascati
Via E. Fermi, 40 I-00044 Frascati (Rome), Italy

E-mail: channeling2008@lnf.infn.it

Fax: +39 06 9403 2559

Web page: <http://www.lnf.infn.it/conference/channeling2008>

Phones:

Secretary:

Donatella Pierluigi : +39 06 9403 2317

Directors:

Sultan Dabagov: +39 06 9403 2877

Luigi Palumbo: +39 06 9403 2281

IN ERICE:

All mails addressed to participants should be sent c/o:

51st Workshop: “Channeling 2008”

FEMCCS - Fondazione “Ettore Majorana” e Centro di Cultura Scientifica
Via Guarnotta 26
91016 Erice (Trapani), Italy

Phone: +39 0923 869 133

Telefax: +39 0923 869 226

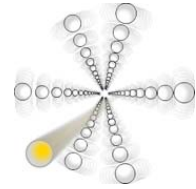
E-mail: hq@emcsc.ccsem.infn.it

Web page: <http://www.ccsem.infn.it/>

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Additional information

PACKING FOR ERICE

Erice's weather in summer is usually hot at noon and pleasantly cool in the evening. Winter weather is generally quite pleasant and sunny, but evenings and some days may be windy and very cool. Sometimes mists make it quite chilly.

Erice is located on the height of approximately 750 m above sea level; therefore the weather is changeable in autumn; disturbed weather may commence any time. For instance, last year the end of October was rather pleasant (sunny, about +25° C during the day and +15° C in the morning).

Try to pack with all this in mind. A pullover sweater is recommended. Be sure to bring rubber-soled shoes. The picturesque cobbled streets of Erice are slippery as well as uneven.

ERICE FOOD

Some recommendations: the strong Italian coffee (caffè/cappuccino), tuna-fish (tonno), sword-fish (pescespada), squids (calamari) and seafood in general, cous-cous with fish soup, egg-plants (melanzane), and many delicious fresh fruits.

ERICE SHOPS

Many shops give up 10% discount to people from the “E. Majorana” Centre. Local specialties include coral jewellery, brightly decorated pottery, a variety of sweet almond pastries, and woven rugs, shawls, or hand bags. Most stores are closed from about one to four in the afternoon. The bank is open only until 1:00 p.m. on weekdays, and it is closed on Saturday and Sunday.

SIGHTSEEING

Everything in Erice is within walking distance. Buses also go regularly to Trapani, which has a beach and a railway station as well as boats to the Aegadian (Egadi) Islands. Either your travel agent at home, or the Secretariat of the “E. Majorana” Centre (at the “Rabi” Institute-San Rocco) after you arrive in Erice, can help you to rent a car if you wish. A car is essential if you wish to make day trips to Palermo, Selinunte, Agrigento, etc., or spend afternoons at the beautiful beach of San Vito Lo Capo. Be forewarned, however, of the difficulties of having a car here. Erice streets are very narrow, with few places to park. The road down to the mountain is narrow, steep, and twisting.

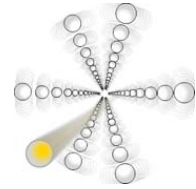
POETIC TOUCH

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 methodical 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 Anchise, by his son Enea, 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

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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 Cyclopeans Walls (~800 B.C.) and the Gothic Cathedral (~1300 A.D.). Erice is at present a mixture of ancient and mediaeval 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 palaeolithic 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.

THE “E. MAJORANA” CENTRE INSTITUTES AND LECTURE HALLS

The “Ettore Majorana” International Centre for Scientific Culture takes its inspiration from the outstanding Italian physicist, after whom the Centre was named. Born in Sicily in 1906, his breadth of vision and the excellence of his contributions to theoretical nuclear physics moved Enrico Fermi to the following comment: *“There are many categories of scientists, people of second and third rank, who do their best, but do not go very far. There are also people of first-class rank, who make great discoveries, fundamental for the development of science. But then there are the geniuses, like Galilei and Newton. Well, Ettore Majorana was one of them”*.

Embracing 110 Schools, covering all branches of science, the Centre is situated in the old pre-mediaeval city of Erice where three restored monasteries (one of which was the residence of the Viceroy of Sicily during the XIV and XV centuries) provide an appropriate setting for high intellectual endeavour. These monasteries are now named after great scientists and strong supporters of the “Ettore Majorana” Centre.

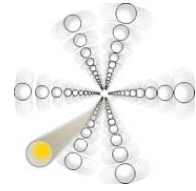
The San Francesco Monastery (former Viceroy's residence) is now the “Eugene P. Wigner” Institute with the “Enrico Fermi” Lecture Hall. The San Domenico Monastery is now the “Patrick M.S. Blackett” Institute with the “Paul A.M. Dirac” Lecture Hall. The San Rocco Monastery is now the “Isidor I. Rabi” Institute with the “Richard P. Feynman” Lecture Hall, the Directorate and the main Secretariat of the Centre.

There are living quarters in all three Institutes for people attending the Courses of the Centre. The Erice Station of the World Laboratory Seismological Network is located in the “Rabi” Institute. The “Daniel Chalonge” and the “Paul A.M. Dirac” Museums are situated at the “Blackett” Institute.

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Instructions to Authors of Abstracts for Oral or Poster Contributions

The Title is Written in Bold, Times New Roman 12, Centered

Author ^a, Author ^b : Times New Roman 12, centered

^aInstitute or laboratory: Times New Roman 10, centered

^bLaboratory: Times New Roman 10, centered

There must be one blank line between the title, the authors' names and their affiliation and two blank lines between the affiliation and the beginning of the body text without any punctuation mark at the end of these lines. Authors and affiliation must not exceed one line each. The name of the corresponding author is underlined.

All abstracts must be written in English and occupy a maximum of 1 page A4 written in Times New Roman 12, alignment in mode “justify”. Please make sure to respect the following margins: top, bottom, right: 25 mm; left: 30 mm.

Reference citations [1] are shown in the text by a number in brackets and follow one double space below the body text under the heading “References”.

No figures, images or photos have to be included in the abstract.

In order to ensure a smooth abstract booklet preparation, please do not insert text or references in “footnote” mode or other encoding.

References

1. The heading “References” follows one double space below the body text in Times New Roman 10 bold.
2. L.J. Marshall, and G. Talleni, Phys. Rev. A **43** (2001) 5897.