



# "Channeling 2006"

# International Conference on Charged and Neutral Particles Channeling Phenomena

Frascati (Rome), Italy July 3 - 7, 2006

( http://www.lnf.infn.it/conference/channeling2006 )\*

Organized by

Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali di Frascati

In cooperation with and sponsored by
HADRON PHYSICS I3 – EU Project
CARE HHH - CERN, Switzerland
SPIE – The International Society for Optical Engineering, USA
UNISANTIS S.A. - Switzerland
ISMN CNR - Institute of Nanostructured Materials, Italy
LPI RAS - P.N. Lebedev Physical Institute RAS, Russia
and
under the high sponsorship of
Comune di Frascati

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 matter of various periodicity structure from the viewpoint of fundamental studies as well as applications. The organization of these conferences based on the traditions of the related successful meetings in Europe, America and Asia (including URSS and former URSS states' conferences) started more than 30 years ago.

The conference 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 radiations in matter (crystals, nanoporous materials, capillaries), and in particular for young scientists who have interest in undertaking new investigations following the foreseen development of the next generation photon sources, as well as an important opportunity for exploring and discussing new international initiatives in radiation penetration science, such as channeling of charged and neutral particles and related studies.

 $<sup>^</sup>st$  For the details of the conference, please, visit the official web site of "Channeling 2006"





The scientific program of conference will include invited talks, oral and poster presentations. Sufficient time for informal discussions will be allocated.

# **Conference 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: proposals and experimental observations
- ✓ Channeling of radiations in capillary systems (micro- and nano-channeling, nanotubes, nanoporous)
- ✓ Novel types of sources for electromagnetic radiation (FEL, Thomson scattering, laser plasma acceleration)
- ✓ Applications of channeling phenomena (bending of the beams, positron sources, powerful radiation sources, x-ray waveguides, capillary/polycapillary optics, novel x-ray table-top instruments)

#### International Advisory Committee

V.L. Ginzburg (LPI RAS, Moscow)

X. Artru (IPNL, Lyon)

R.O. Avakyan (YerPhI, Yerevan)

H. Backe (UM, Mainz)

V.G. Baryshevsky (INP BSU, Minsk)

M. Calvetti (LNF INFN, Frascati)

R. Carrigan (Fermilab, Batavia)

Ch. Deeney (SNL, Livermore)

G. Diambrini Palazzi (UR "La Sapienza", Rome)

I. Endo (HU, Hiroshima)

W. Greiner (FIAS GU, Frankfurt)

M.A. Kumakhov (IRO, Moscow)

A. Pathak (UH, Hyderabad)

A.P. Potylitsin (TPU, Tomsk)

W. Scandale (CERN, Geneva)

N.F. Shul'ga (KIPT, Kharkov)

H.M. Uberall (CUA, Washington)

U. Uggerhoj (UA, Aarhus)

Zhiyuan Zhu (SIAP, Shanghai)

#### Programme Committee

E. Akopov (SPIE, Moscow)

K. Chouffani (UA, Athens)

S.B. Dabagov (LNF INFN, Frascati & LPI RAS, Moscow)

A. Giulietti (IPCF CNR, Pisa)

S. Gus'kov (LPI RAS, Moscow)

F.F. Komarov (BSU, Minsk)

G.J. Lolos (UR, Regina)

M. Preger (LNF INFN, Frascati)

L. Serafini (Milano INFN, Milan)

# Organizing Committee

S. B. Dabagov (LNF INFN, chairman)

L. Palumbo (UR "La Sapienza", co-chair)

G. Cappuccio (ISMN CNR, co-chair)

G. Cibin (LNF INFN)

A. Esposito (LNF INFN)

M. Ferrario (LNF INFN)

D. Hampai (ISMN CNR)

G. Mazzitelli (LNF INFN)

C. Petrascu (LNF INFN)





# Technical Program, Abstracts and Proceedings

The scientific program of the conference will include invited presentations by the experts in the field of the "Channeling 2006" topics, selected oral presentations, and poster sessions.

Each author is requested to submit a camera-ready copy of an abstract of his contribution in English **not** later April 30 via e-mail <a href="mailto:channeling2006@lnf.infn.it">channeling2006@lnf.infn.it</a>

Authors are kindly required to follow *the guidelines for Abstracts of Oral or Poster Contributions* (in doc, LaTeX), or pdf formats). 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.

All the papers will be published in the <u>SPIE</u> Proceedings Series as a special issue (please, follow <u>the guidelines for Manuscript preparation</u>). The deadline for the manuscript submission is **July 7, 2006.** 

For further information or questions do not hesitate contacting the Organizing committee by channeling2006@lnf.infn.it

#### **Exhibition**

During the conference, an exhibition, including new X-ray instruments and devices recently developed by UNISANTIS SA and other companies will be organized.

Limited space will be available for the exhibition of small equipments, leaflets and books. Interested companies should contact the conference <u>secretariat</u>. Further instructions will be continuously provided.

Please contact the secretariat if you would need further information.





# Registration & Fee & Accommodation

	Before May 31, 2006	After May 31, 2006
	(Bank Transfer)	(Cash at the Registration Desk)
Full registration	300	400
Students	100	200
Accompanying person*	100	150

The conference fee includes the welcome reception, coffee breaks, abstract booklet and 1 copy of the proceedings, and social events.

## For International Bank Transfer:

IBAN	IT94 E010 2539 1401 0000 0640 304
SWIFT	IBSPITTM
Bank	SANPAOLO IMI SpA, 00326 Via Delle Sorgenti, 128 00046 Grottaferrata (RM), Italy
Beneficiary	Sultan Dabagov
Mentioning for Identification	CHANNELING 2006 - Registration  LASTNAME - TOWN
Address	Via Delle Sorgenti, 128 00046 Grottaferrata (RM), Italy

# For **National** Bank Transfer (from Italy):

Organization	Sultan Dabagov
Bank Account Number	1000/00640304
Bank	SANPAOLO IMI SpA, 00326
Address	Via Delle Sorgenti, 128 00046 Grottaferrata (RM), Italy
National Transfer Bank Code	E 01025 39140 100000640304
Bank Identification SWIFT	IBSPITTM
Mentioning for Identification	CHANNELING 2006 - Registration  LASTNAME - TOWN

All details of your bank transfer must be reported on the Registration form.

<sup>\*</sup> For accompanying person the fee covers the cost of both a social dinner and an excursion. Before May 31, 2006 payment should be done by the Bank Transfer to:





A special accommodation rate has been arranged with the <u>Conference's Hotels</u> (see the list below - <u>map</u>). Participants are kindly asked **to book hotels by themselves** using <u>this form</u>. The accommodation will be for the period of the conference (arrival on Sunday, July 2<sup>nd</sup>, departure on Saturday/Sunday, July 8/9<sup>th</sup>), breakfast included. Please, note that this offer is valid only for a limited number of rooms: all the interested participants are strongly encouraged to make reservation **in advance**.

Hotel reservation and registration for the conference should be done separately.

# Important date deadlines

Abstract submission April 30, 2006

Manuscript submission July 7, 2006

Pre-Registration May 31, 2006

Hotel reservation preferable before **April 15, 2006** 

#### Venue

Frascati (~ 20 km to south of Rome) is a famous and popular town of the "Castelli Romani" well known for its beautiful villas and quality wines. Sited on wide terraces, it forms a balcony to the plain leading towards Rome, offering wide panoramic views stretching from the Tyrrhenian Sea to the Sabine mountains. The town originated in the first few centuries of our ear amides the ruins of Roman patrician villas. Its healthy climate and closeness to Rome has meant that Frascati has always been a centre of attraction for both Italian and foreign tourists.

Famous research centers placed here lend Frascati an international importance. Frascati houses the most important scientific centers in Italy that found here calm and peace only a few minutes from Rome.





#### How to get to the conference

The "Channeling 2006" conference will be held at Frascati's National Laboratory (LNF). To get to LNF, please, follow the instructions below (copy of the official LNF's web site information: http://www.lnf.infn.it/lnfadmin/travel/).

#### By Airplane

- From <u>Fiumicino Airport</u> "**Leonardo da Vinci**" to "Roma Termini" central railway station: take the <u>"Leonardo Express"</u> train; the journey takes about 35 minutes; tickets are available at the Airport station and cost 9,50 Euro.
- From <u>Ciampino Airport</u> "G. B. Pastine" take a bus ( <u>Schiaffini Travel</u> or <u>COTRAL</u>) to reach the Ciampino Railway Station (tickets cost 0,77 Euro).

From Termini and Ciampino Railway Stations take a train to Frascati or to Tor Vergata Stations (see below).

Alternatively, you can take a taxi from the Airport to Frascati (licensed white or yellow cabs are strongly adviced). From Fiumicino the distance is about 30 km and the taxi fare amounts to approximately 70,00 Euro. From Ciampino the taxi fare is approximately 40 Euro.

#### By Train

@ from Roma "Termini" railway station:

- From "Roma Termini" **to Frascati-LNF:** take the train <u>Roma-Cassino (FM6)</u> and get off at "Tor Vergata". The journey takes about 20 minutes. The LNF are at 150 m uphill on E. Fermi Street. Tickets are available at tobacconist's shops and newspapers kiosk and cost 2,00 Euro.
- From "Roma Termini" **to Frascati downtown**: take the train <u>Roma-Frascati</u> (<u>FM4</u>). Frascati station is in 2 km distance from LNF and it is possible to take a taxi to LNF.
- Otherwise from "Roma Termini" take the Underground ("linea A") to the "Anagnina Station", then a bus to Frascati (nearly every 30 minutes). Tickets are available at tobacconist's shops and newspapers kiosks and cost 2,00 Euro.

Alternatively you can take a taxi (from Termini Station fare amounts to approximately 52,00 Euro).

@ from Ciampino railway station:

• From Ciampino Railway Station to Frascati you can take a train on both lines: to Tor Vergata (FM4) or to Frascati downtown (FM6). Tickets cost 1,50 Euro.

#### By Bus

There is a bus service (ENEA/INFN) from Rome to LNF only during working days from Monday to Friday (see <u>timetable</u>).

#### By Car

You can take the ring highway "Grande Raccordo Anulare", Exit 21-22 (see map), then the state highway "Tuscolana" to <u>Frascati</u>. Turn left (via E. Fermi) at the traffic-lights after Villa Mercede Hotel

#### Meeting Bus

During the meeting days a shuttle bus will link the conference hotels with the LNF, in accordance with the beginning and the end of the meeting activities.





## Contact information

# "Channeling 2006"

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

E-mail: <a href="mailto:channeling2006@lnf.infn.it">channeling2006@lnf.infn.it</a>

*Fax:* +39 06 9403 2559

Website: http://www.lnf.infn.it/conference/channeling2006

Phones:

Secretary: Donatella Pierluigi: +39 06 9403 2317

Chairman: Prof. Sultan B. Dabagov: +39 06 9403 2877

**Co-chairs:** Prof. Luigi Palumbo: +39 06 9403 2281

Dr. Giorgio Cappuccio: +39 06 9403 2593





*Instructions to Authors of Abstracts for Oral or Poster Contributions:* 

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

Authors are cited in Times New Roman 12, centered: Author xxx, Author yyy\* Institute or laboratory: Times New Roman 10, centred: xxx, \*yyy

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. Reference citations are shown in the text by a numeral in brackets and cited under the heading "References".

[2] L.J. Marshal, and G. Talleni, Phys. Rev. A 43 (2001) 5897.