<p style="text-align:center">**NUMEN2015 --- FINAL CIRCULAR**</p>

The two-day workshop on "Challenges in the investigation of double charge-exchange nuclear reactions: towards neutrino-less double beta decay" (NUMEN2015), which will be held at INFN-LNS, Catania (Italy) on **December, 1-2, 2015**.

This circular will also be available on the workshop web site:
http://agenda.infn.it/event/NUMEN2015

<p style="text-align:center">*SCIENTIFIC PROGRAM AND FORMAT*</p>

Double Charge Exchange (DCE) reactions are the object of a worldwide renewed interest, also for the information that one could extract on the nuclear matrix elements shaping the lifetime of the double beta decay.
This possibility is essentially based on the coincidence of the initial and final state wave-functions in the two classes of processes and the similarity of the transition operators, which in both cases present a given superposition of Fermi, Gamow-Teller and rank-two tensor components with a relevant implicit momentum available.

An intense experimental activity on DCE reactions is planned at the LNS-Catania, according to the NUMEN project.

The aim of the workshop is to critically discuss the state of the art and possible future developments of the theoretical models of DCE reactions, as well as the crucial aspects of the experimental techniques and analyses. A central point would be the identification of the experimental conditions more suitable to extract, by comparison with the model predictions, the nuclear matrix elements of the DCE process.

We also aim at dedicating critical discussions to the analogy between the theoretical description of the neutrino-less double beta decay and of double charge exchange reactions, to point out differences and similarities between the two processes.

The format of the workshop consists of invited talks and two discussion sessions.

Speakers and discussion leaders

N.Auerbach	*Tel Aviv University (Israel)*
R.Broglia	*Università di Milano (Italy) and Niels Bohr Inst., Univ.Copenhagen (Denmark)*
L.Calabretta	*LNS-Catania (Italy)*
O. Civitarese	*Dept. Phys., University of La Plata, Buenos Aires (Argentina)*
H. Ejiri	*RCNP, Osaka University (Japan)*
A. Faessler	*University of Tuebingen (Germany)*
D. Frekers	*University of Muenster (Germany)*
M. Horoi	*Dept. Phys., Central Michigan University (USA)*
J.Kotila	*Dept. Phys., University of Jyvaskyla (Finland)*
F. La Via	*CNR-IMM (Italy)*
H. Lenske	*University of Giessen (Germany)*
D. Lo Presti	*INFN-Catania (Italy)*
G.Potel	*Lawrence Livermore National Laboratory (USA)*
M. Takaki	*Center for Nuclear Study, Univ. of Tokyo (Japan)*
K. Zuber	*Technische Universität Dresden (Germany)*

GENERAL INFORMATION

NUMEN2015 will take place at INFN – Laboratori Nazionali del Sud, Main Conference Room.
The workshop will begin on Tuesday, December 1st, at 9:00 am and will end in the afternoon of Wednesday, December 2nd.
The program will be soon available on the workshop website
http://agenda.infn.it/event/NUMEN2015

A transportation service to the workshop site and back to the city center will be organized.
On December 1st, the bus will leave from "Piazza Stesicoro" - Stesicoro Square –
(http://www.viamichelin.com/web/Maps?address=Catania%2C%20piazza%20stesicoro)
at 8:15 am and will make a stop at "Piazza Giovanni Verga" – Giovanni Verga Square -
(http://www.viamichelin.com/web/Maps?address=Catania%2C%20piazza%20verga) at 8:30 am.
On December 2nd, the bus will leave from "Piazza Stesicoro" at 8:45 am and from "Piazza Giovanni Verga" at 9:00 am.
The LNS can be easily reached, from the city center, also by public transportation (see the conference website for more details).

A social dinner will take place on December 1st at 8:30 pm, at the restaurant of the Katane Hotel, in the city center. The price is 40 €.
Participants who wish to participate are kindly requested to confirm, by sending an e-mail to colonna@lns.infn.it .

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