This is the Title of the Latex Contribution to the LNL Annual Report 2011

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INTRODUCTION

For the LNL Annual Report 2011 only papers reporting new results/activities which took place within 2011 can be accepted. The papers must be written using this template or the corresponding Word template (both can be found in the web site). In the former case it is necessary to have Revtex 4 installed and to download the style files lnl.rtx and revtex_lnl.cls. You can use this template in a simple way by directly replacing this text with your text in any section (Titles, Sections, Captions, etc.). In case you do not find proper examples in this template, please contact the editors. The original text and figures, in editable formats, must be submitted for publication. Pdf-formatted copies of the papers can be useful as examples, but the final pdf version will be produced by the editorial committee. Before publishing, the Authors will have their papers available for the final verification for a couple of weeks in the LNL Annual Report site (in addition to possible previous correspondence concerning specific points, if any).

The maximum allowed length of the manuscript is two pages, longer contributions will not be accepted.

TITLES, AUTHORS AND AFFILIATIONS

For the title of your contribution, please capitalize all words except articles, conjunctions and prepositions, these last ones only if there length is up to five letters. It is requested to keep each Author's first-name initial(/s) and surname in the same line, and no "and" has to be written before the last Author's name. Each affiliation must be completely contained within a single line; each line shall contain more than one affiliation (when applicable) whenever possible. Please do not write full addresses, but only the City, the Province/State when applies and the Country.

FIGURES AND TABLES

In the figures, all of the alphanumeric labels should be clearly and easily readable. Please note that this is a very important requirement for the paper acceptance. In case a figure is obtained by scaling down a large original, it may be necessary to re-write the labels in order to obtain a text of adequate size. In the following you can find an example of how to insert a figure. The format of the figure should be encapsulated postscript (eps), but also jpeg figures will be accepted. Any text included in a figure should be clearly readable.
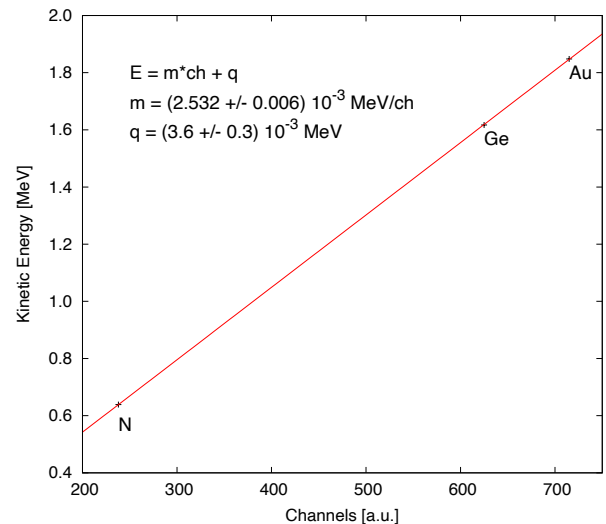

Fig. 1. Insert here the caption of the figure. This is a long dummy text to check the editor.

Tables may be created directly (see table 1) or inserted as an image. It is essential that the table content be easily readable: the character size must be adequate. The table caption has to be placed on top of the table, the figure caption below the corresponding figure. A figure or a table may

occupy the width of two columns, if necessary. In this case, it cannot be placed below the references (at the end of the paper).

Table 1. Insert your caption here. This is a long dummy text to check the editor.

$E_{c.m.}$ (MeV)	σ_{ER} (mb)	$E_{c.m.}$ (MeV)	σ_{ER} (mb)
85.36	0.0011±0.00079	95.97	116.2±1.8
85.84	0.0022±0.0010	96.93	132.2±2.9

TEXT BODY EXAMPLE

This is just some dummy text to fill up the empty space.

The evolution of nuclear properties towards the neutron drip line depends on how the shell structure changes as a function of neutron excess. This evolution has consequences on the ground state properties (spin, parity, and electromagnetic moments) and on the single-particle and collective excitations. In particular, studies of neutron-rich nuclei beyond doubly magic ^{132}Sn are of key importance to investigate the single-particle structure above the $N = 82$ shell closure and find out how the effective interaction between valence nucleons behaves far from stability.

A powerful tool to study the evolution of the shell closures far from stability is provided by fusion and transfer reactions. For instance, one-particle transfer reactions allow one not only to determine the position of the single-particle states (providing information on the effective mass), but also their occupation probabilities via the spectroscopic factors, which provide detailed information on the mixing of single particle states with more complex configurations.

The SPES project is one of the main Nuclear Physics development in Italy for the next years. It is organized as a wide collaboration among the INFN Divisions, Italian Universities and international Laboratories. The SPES collaboration allows covering all the specific aspects of the project, also those outside the main competences available inside INFN. A strong link and support was established with ISOLDE (CERN, Switzerland) and HRIBF (ORNL, USA). With SPIRAL2 (GANIL, France) there is a collaboration in the frame of LEA (Laboratorio Europeo Associato) which aims to share the technical developments and the scientific goals in the field of Nuclear Physics with exotic beams.

SPES is an up to date project in this field with a very competitive throughout representing a step forward to the European project EURISOL. The relevance of the project is not only related to the Nuclear Physics research but also to Astrophysics and Applied Physics: mainly for Nuclear Medicine, material research and nuclear power energy.

The possibility to operate at the same time the ALPI Superconductive Linac, the high current RFQ and the 2 exit ports Cyclotron give a large improvement to the research capabilities at LNL. The first exotic beam at SPES is expected in 2014.

Our results comes from analysis of previously published work [1–4, 7], and also from some ideas only briefly cited in [8]. With this we can put an example of an equation can be found in the following [11]:

$$L(E) = a_1 \left[E - a_3 \cdot A \cdot Z^2 ln \left(\frac{E + a_2 AZ^2}{a_2 AZ^2} \right) \right] \qquad (1)$$

Numbering the equation is left free. As is the rest of this dummy part.

FINAL NOTES AND REFERENCES

Between numerical values and measurement units there should, as a rule, be a space; e.g.: 200 μg/cm^2.

In case your contribution is only slightly longer than one page, please try to restrict it into one single page.

Please follow the examples in writing your references.

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