

EURISOL NET
Physics & Instrumentation
TASK 2

within the ENSAR FP7 framework

ACTIVITIES

A town meeting every second year
and a topical meeting per year

First Workshop at GGI Florence, Jan. 2008.

1st Topical Meeting LNS-Catania, Dec.2009

2nd Topical Meeting Valencia, Feb.2011

3rd Topical Meeting & Town Meeting, 2012

keep update the physics case

- *Experimental/Technical update*
- *Theoretical state-of-the-art*

EURISOL User Group
Topical Meeting Valencia
Neutron deficient exotic nuclei and
the Physics of the "proton rich side" of the nuclear chart

Report to be written by B. Rubio, B.Blank, L. Ferreira.

We hope to have it ready before the summer 2011

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Neutron deficient exotic nuclei and
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PRL 100, 192503 (2008)

PHYSICAL REVIEW LETTERS

week ending
16 MAY 2008

Experimental Evidence of ^2He Decay from ^{18}Ne Excited States

G. Raciti,* G. Cardella, M. De Napoli, E. Rapisarda, F. Amorini, and C. Sfienti

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Two-proton decay from ^{18}Ne excited states has been studied by complete kinematical reconstruction of the decay products. The ^{18}Ne nucleus has been produced as a radioactive beam by ^{20}Ne primary projectile fragmentation at 45 AMeV incident energy on a Be target. The ^{18}Ne at 33 AMeV incident energy has been excited via Coulomb excitation on a ^{208}Pb target. The obtained results unambiguously show that the 6.15 MeV ^{18}Ne state two-proton decay proceeds through a ^2He diproton resonance (31%) and democratic or virtual sequential decay (69%). The quoted branching ratio has been deduced from relative angle and momentum correlations of the emitted proton pairs.

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PHYSICAL REVIEW C, VOLUME 63, 044604

Comparison of transfer-to-continuum and eikonal models of projectile fragmentation reactions

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(Received 24 October 2000; published 13 March 2001)

PHYSICAL REVIEW C

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OCTOBER 1991

Stripping to the continuum of ^{208}Pb

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(Received 10 May 1991)

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Highlights for the report: please discuss with me

Ground state properties: mass measurements, $T_{1/2}$, gamma widths... and fundamental symmetries.

These are important for our science in general and will have a relevant place in the final EURISOL NET report.

Laser spectroscopy is a very promising methodology which is particularly interesting for the synergies with other fields of Physics.

Direct measurement for nuclear astrophysics: dedicated target station... low energy

Dedicated target station...high energy, for charge-exchange &/vs beta decay

Exotic excitation modes: effect of Coulomb barrier on protons...(discussed in several talks...)

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*N=Z nuclei...shel model still good (...even for the very rare ^{100}Sn)
(p,d) would need post accelerated EURISOL beams:
high energy target station*

np paring...best incident energy?

Clustering...

Thanks! ...

and see you in 2012

Please remember to send your contribution ASAP