

Minutes of the Second Meeting of the Physics & Instrumentation Task of the EURISOL Design Study

GANIL, 30th November 2005

T10-02,GANIL,301105

Present: N. Alamanos, J. Äystö, F. Azaiez, B. Blank, P.A. Butler, A. Bonaccorso, W.N. Catford, B. Cederwall, G. De Angelis, P.T. Greenlees, J. Jastrzebski, K. Jungmann, A. Kordyasz, K. Lagergren, R.C. Lemmon, H. Mach, O. Naviliat, F. Negoita, J. Nyberg, N.A. Orr, R.D. Page, G. Prete, M. Romoli, J.A. Scarpaci, P.M. Walker, V. Zamfir

1. **Apologies:** C. Volpe

2. **Minutes of previous meeting:** Accepted.

3. **Matters arising:** None.

4. **Requirements for beam energy & time structure:** NAO initiated a discussion as a representative of the Heavy Ion Accelerator task. The issues discussed included the possible modes of parallel operation of beams and the consequences of these for the accelerator design, the production targets and the experimental programme; whether the upper energy limit should be increased to 150 MeV/u (or higher) for secondary fragmentation and charge exchange reactions, for example; and the time structure required for the beams. Feedback was requested before the Trento workshop, where these issues would be discussed again.

5. **Neutron detection:** NAO announced that he had funding for a 2-year PDRA appointment, partly funded by EURISOL, to investigate neutron detection. The aim was to appoint someone in Spring 2006 and applications were welcomed.

6. **Progress reports from sub-tasks:**

a) **Limits of stability:** BB discussed the question of whether secondary fragmentation reactions would be required to access the most extreme nuclei, requiring a fragment separator. Answers would require input from the Beam Intensity Calculations Task.

b) **Ground state properties:** PMW presented the conclusions of the first meeting of this sub-task, which had taken place on 29th November. The question emerged of how much ion source and mass separator development was needed.

c) **Single particle & collective properties:** AB reported that a student and a PDRA had been working on ideas related to this sub-task. There were significant overlaps with an Italian theory network.

d) **Superheavy elements:** PTG reported that the SPIRAL2 γ -ray spectroscopy workshop provided a good starting point for this sub-task and responses were still coming in.

e) **Phase transitions/nuclear reactions & dynamics:** It was proposed that F. Gulminelli be approached regarding the leadership of this sub-task. AB agreed to contact her.

f) **Astrophysics:** HM reported the difficulties in obtaining positive responses from people. It was suggested that the CARINA Network would be a useful point of contact.

g) **Neutrino interactions:** ON reported that this sub-task was getting organized.

h) **Fundamental interactions:** ON reported that a core of 4 people was already established. Theoretical input was still required.

People were strongly encouraged to sign up for the various sub-tasks and get involved.

7. **Trento workshop:** RDP gave an outline of the Trento workshop. People interested were strongly encouraged to participate.

8. **Issues for EURISOL DS Management:** Complaints were voiced about having to provide information to the Management twice over in a short space of time. People were also annoyed about the changes to the format of the EURISOL week after they had approached potential speakers. This had left a poor impression of the Design Study.

9. **Any Other Business:** None.

10. **Date & venue of next meeting:** The Trento workshop, 16th – 20th January 2006.