

Minutes from the g-RSING workshop held in Leuven, January 31, 2005

By G. Neyens

Results from the technical presentations.

- the magnet: coil radius is 36 cm, pole caps variable, maximum field is 1.1 T at 10 cm pole opening. Homogeneity over a large (5 cm) volume is measured as $2 \cdot 10^{-4}$.

Action: The remote control of the magnet power supply, including a field switching option, will be integrated in the GSI data acquisition system (J. Grebozs, N. Vermeulen).

- The holding structure for magnet + detectors: has been designed in Leuven. Needs now to be validated by the FRS technical team (F. Becker, S. Mallion). The construction could be done at Leuven (G. Neyens) and another candidate is Krakov (A. Maj).

Action: design to be approved (F. Becker), construction place to be decided (GN / AM).

- The stands for the Ge Clusters (8 or 10): If the BGO shields are used as passive shielding, then 8 Clusters can be positioned at the distance of 36 cm from the crystal and at 60 degrees w.r.t. each other. It is suggested to use the 3-legged stands, as they were designed and build at Rossendorf some time ago. R. Schwengner volunteers to build the additional ones that are needed.

Action: A design without shields should be made (S. Mallion), to see what is the maximum Clusters that can be placed (including the 3-legged stands) and at which angles and distances the Clusters appear. Then we decide how many stands are needed, and if the 3-legged design is suitable.

It should be verified if with the present design, the cluster can be mounted such that 3 of the crystals are in the horizontal plane, with 2 crystals above and below that (to have a symmetric set-up w.r.t. the vertical and horizontal plane). (S. Mallion / R. Schwengner).

- Vacuum chamber: it was decided that no vacuum chamber will be used. However, the air gap should be taken into account when calculating the probability for electron pick-up (expected negligible in this air gap of about 1 meter).

- The beam line detectors: a design of the beam line set-up (particle detectors, collimator, energy degrader, ...) should be made and it's compatibility with the magnet/detector holding structure verified.

Action: F. Becker / S. Mallion.

Following proposals have been presented:

1. g-factors of isomeric projectile fragments around ^{100}Sn . (D.L. Balabanski and M. Hass)
2. g-factors of relativistic fission fragment isomers around ^{132}Sn (G. Simpson)
3. spin-alignment of relativistic fission fragments around ^{132}Sn (G. Neyens)
4. g-factors of relativistic fission fragment isomers around ^{100}Zr (J.M. Daugas)

It was suggested that another proposal using projectile fragments could be included. Two suggestions were mentioned:

5. g-factors of isomers produced by ^{136}Xe fragmentation, to address the neutron rich region between the stability line and ^{132}Sn . G. Simpson has proposed to work out this proposal, although it would be good if another spokesperson is contacted (from Koeln?).

6. g-factors of isomeric states in the neutron deficient Pb-region, was suggested to be worked out by F. Becker/J. Gerl. Here it is likely that a He-like charge state of Pb should be selected, and the probability that this beam reaches the stopped in the same charge state should be calculated.

Suggested time scales:

- Proposals submission: Gerda will submit all to the GSI committee on 19/02.
 - each spokesperson sends the technical sheet to F. Becker asap (latest on 11/02) and to Gerda as well.
 - each spokesperson sends his final proposal+feasibility+beam time request to G. Neyens by 17/02 (earlier if possible)
 - Gerda puts all proposals in one general g-factor proposal, with a common introduction and summary of total beam time request. She sends it back to the proposers by 18/02 leaving them 1 day for minor comments to be added. On 19/02 she submits to GSI.

- The GSI PAC meeting: on 21-22 March, all proposers should be present.
 - the campaign is introduced (10 min) by GN
 - each experiment is proposed individually by the spokesperson (10 min)

- The experiments:
first campaign (feasibility test of fission fragments) foreseen spring 2006. Following campaigns later in 2006, suggested as 8-10 days + 1-2 weeks break between two measurements leaving the set-up on place.