Minutes

Charissa Group Meeting

Meeting held on: 3 November 1999

Meeting held at: Birmingham

Present:	BRF(Chair), WNC, SPGC, NMC, NJD, LD, MF, BJH (for DLW), SSJ, DM, MPN,WDMR, RPW
Distribution:	Those above plus RAC,RCL,DLW,NAO all by e-mail/server

---

Minutes

1. **Apologies and Welcome:**

   Apologies were received from RAC, VP, DLW.

   Djelloul Mahboub (Surrey) was welcomed to the collaboration.

   SPGC will be leaving in December and was thanked for his contribution.

   The collaboration welcomed the news from EPSRC that the new grant application, which was considered at the prioritisation panel meeting on 22 October, had been successful. Detailed discussions concerning the cut items and the filling of various posts would await further details and a formal announcement.

2. **ANU September 1999 running period and 2000 running:**

   A list of tasks from the September running period had been collated and was circulated at the meeting, and an extra task was identified (amended list attached at annex A).

   Recent advice from DCW (ANU) was that the linac would be unavailable in January. The plan had been to run the 10+ proposal (SPGC) in January, but this required the linac. It was agreed that the January running plan was now untenable, and as a consequence the 10+ beamtime and 4 other days of approved time would expire formally at the end of January 2000.

Although no new call for proposals had been issued, the plans for new proposals were reviewed, and tentative interest was expressed by WNC/DM, MF, DLW (10+ resubmission), NMC (Meghadon), and a group of three proposals that might be best suited either to ANU or to Strasbourg from BRF, LD and MPN.

EPSRC should be contacted to clarify the timing for the next PAC. BRF

In view of the above discussions, it was agreed that two trips to ANU were required, with the first of these being a technical trip planned for a time close to Easter 2000. The purpose of this trip would be to resolve the chamber, beam line and DA issues, and it should also help to spread the knowledge base for the various procedures amongst the staff members. DLW,WDMR,VP

WDMR would arrange a meeting of the above to help carry this forward. WDMR

The second trip would be to perform experiments and probably including new proposals as indicated above. Proposals should be prepared before 25 December. ALL

3. GANIL running plans:

There are presently three approved proposals, using beams of ^{12}Be (GANIL), ^{24}Ne and ^{8}He (SPIRAL).

WNC reported that the most recent indications had been that the ^{12}Be experiment could possibly run in the first half of the year. It required new annular detectors that had been ordered from Micron, but would not require the Silena ADC modules that currently await repair. It was not clear whether it would use the new acquisition system or the existing GANIL system. The items that would be required were preamplifiers, amplifiers, CsI detectors and some logic modules.

MF reported that the ^{8}He run was envisaged to be not until the last part of the year, and WNC reported that the same was true for the ^{24}Ne. These runs would use the new acquisition system with VXI adc's, and the status of this system should be ascertained. A meeting would be organised to discuss the assembly and testing of the new electronics and DA system purchased for running at GANIL. WNC

No new submissions were planned for the 1 December 1999 PAC deadline, since there were already the above three approved proposals for the relevant running period.

4. Strasbourg tasks and running plans:

MF reported that his proposal (T=2 states) had been successful in the recent PAC. The time would not be requested before June 2000.

The next PAC was anticipated for April/May 2000 and submissions were planned by RPW/NJD, DLW (tentative) and possibly the three experiments identified in item 2 (BRF, MPN, LD).

The main items of work required to bring the beam line and DA system back into full operation were discussed:

(a) *Silena ADC repairs:*

A quotation (£6K for 20 modules) had been received from Southern Scientific. There was some hope that this could be reduced if it were possible to indicate the problems with each module more precisely, but the general feeling was that this was marginal and that the repairs would be worthwhile and cost effective,

(b) *DA system re-build:*

MF and SPGC outlined the three possibilities:

i: repair the old system, which had broken down partly through old age,

ii: adopt the test system developed by SPGC for Oxford and Birmingham, which uses CAMAC+VME, where the CATCH reads the FERA bus; at present a Starburst is used for headers and a laptop PC controls but could be replaced by a VME processor,

iii: adopt the system developed by VP for Louvain-la-Neuve, which uses CAMAC+VME with the F2VB unit, but has difficulties with direct CAMAC backplane readouts.

It was agreed to adopt the second solution, which would be the same as the UK test systems for the ANU system. VP would also be involved in further development. MF,WDMR,VP

MF would organise a meeting of the above to help carry this forward. MF

(c) *Beamline and chamber issues:*

A number of items require attention, and visits will be required prior to any running. RAC,DLW,RPW,NMC

NMC would organise a meeting of the above to help carry this forward. NMC

5. Overview of running plans:

	Dec99	Jan	Feb	Mar	Apr	May	Jun	Meeting
ANU proposals	$\surd$							BRF
Prepare ANU work		$\surd$	$\surd$	$\surd$				WDMR
ANU technical trip					$\surd$			WDMR
Strasbourg DA work		$\surd$	$\surd$	$\surd$	$\surd$	$\surd$		MF
Strasbourg beamline work		$\surd$	$\surd$	$\surd$	$\surd$	$\surd$		NMC
Prepare Strasbourg run					$\surd$	$\surd$	$\surd$	MF
Prepare GANIL run		$\surd$	$\surd$	$\surd$				WNC
GANIL new DA work		$\surd$	$\surd$	$\surd$	$\surd$	$\surd$	$\surd$	WNC

6. Any other business:

(a) *Status of present grants:*

The status of the grant at each institution should be reviewed in connection with the ideal start date for the new grant, and BRF advised before 10 November. WNC,BRF,WDMR,RPW,DLW

(b) *Web server at Daresbury and web-based publicity material:*

It was agreed that Richard Wooliscroft and Nick Ashwood, students at Birmingham, would take over from SPGC the Charissa publicity pages presently held on his account at Oxford. **MF**

Maintenance of the server at Daresbury would be taken over by DM. **DM**

(c) *ANU annual report:*

RPW would be contacting those who had run experiments in the relevant period. **RPW**

Cooperation from all those with recent ANU running was required. **ALL**

(d) *LISE-2000 commitment:*

MF sought clarification/agreement regarding the financial commitment that could be advised to the French collaborators. It was agreed that they could be advised that the full amount requested could be committed. **MF**

7. Date of next meeting:

One day Physics meeting: Staffordshire 12 January 2000. **RPW,ALL**

Next group meeting: **to be advised**

Annex A:

List of tasks at ANU following September running period

(a) software and computing issues:

i: there is no facility to copy DLT's,

ii: the DA was hung on the last day and could not be restarted; the documentation to re-start is not updated to include the F2VB module,

iii: the laserprinter and Xterminal keep crashing,

(b) beamline issues:

i: the alignment appears to be wrong, especially side-to-side, by up to several millimetres (cf. beam spot on target), and must be checked,

ii: the cold cathode gauge on the chamber is unreliable and needs attention,

iii: mylar windows for MEGHA have been returned for replacement,

iv: the collimator could possibly be supplemented by a smaller diameter one (note that one the one hand, beam can be steered around by mm on target, but on the other hand the focus must not be brought forward to the collimator),

(c) technical DA and electronics issues:

i: the FEED control cable was unreliable and requires replacement,

ii: there appears to be no real measure of the raw strobe rate during actual running, which means that the dead time scaling is unreliable,

iii: there is 4 MHz noise on all silicon signals that limits the level to which the discriminators can be lowered, since this noise is not filtered out in the first stage of the amplifiers (after which the discriminator operates); the low level corresponded to approximately 2 MeV in energy provided that the new link cables were used (q.v.),

iv: link cables were lashed up to connect the probe outputs for the discriminator signals between corresponding strip ends, thus making the trigger inside each amplifier effectively equal to the OR of the two strip ends, instead of effectively the AND being required to convert the signals at both ends; these unshielded cables worked well but should be reassessed,

v: one CsI was troubled by excessive noise and NMC had to lash up a passive filter to remove this prior to the amplifiers,

vi: the second-level trigger does not work, possibly due to a problem in the programming of the TAIL and FIACRE timing in the new (PCB) versions of the modules, and was introducing ghosting of spectra with a 300ns shift,

(d) support issues:

i: the manuals need updating,

ii: there are only about a dozen blank DLT tapes remaining,

iii: new interface parts will be required for extra signals, e.g. MEGHADON, and this could involve Daresbury. $\boxed{\text{BRF}}$

W.N. Catford, Secretary. November 6, 1999 (released November 9, 1999)