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Strasbourg
Suggested Scheme for Running

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Suggested Scheme for Running at the Vivitron

1. Present plans

At present our plans are to move the existing electronics and DA system to ANU. This setup comprises approximately 80 preamps and amps, 80 ADC channels and 32 TDC channels. This will be used for the runs planned in October 1993 and April 1994

In September 1994 we hope to have the new DA system working with the new array. This setup comprises 288 (256+32) analogue channels and a XXX channel (number from RH) DA setup with the multi- hit TDC's.

2. Emerging plans for Strasbourg

As a result of recent discussions it is now planned that we will ship the existing Charissa chamber and beamline to Strasbourg to provide a setup on which early experiments on the Vivitron might be performed (eg Coulomb barrier studies or light ion breakup using the existing hybrids). However, there is at present no DA system available at Strasbourg.

In addition, it is suggested that in the future experiments might be mounted which would benefit from running the new array detectors in association with the ICARE setup. It appears possible to merge the readout of both systems. However this would require the construction of spcialist electronics modules and would also of course involve the problems of shipping the nwe array to and from ANU for experiments. While the shipping of the detector assemblys themselves is a relatively straightforward process, shipping the readout system is a major job. The alternative is to build a separate readout system at Strasbourg (along with a small extension chamber to house them on the end of the existing scattering chamber) and to move the detector assemplies between locations as the experimental programme requires.

3. Suggested approach

At present we envisage a main programme concentrating on cluster studies at ANU which from next September will use the new array. In parallel we see an emerging programme of reaction studies developing at Strasbourg, starting sometime next year. How these two lines develop remains to bee seen, but we would certainly want to be in a position to continue both if they are productive.

To keep our options open for running both at ANU and Strasbourg the following plan is suggested.

1. The existing electronics and DA system be moved from ANU to Strasbourg after the running period in April 1994. The electronics would be installed in the cave near the chamber shared with the ICARE readout. [NB This would require approx. 20m cables which we will need to provide]. We would need to establish what additional DA items we would need to purchase since these would no longer be available for the new setup at ANU.

2. A bid be made to the NPC in the next grant round (starts October 1994) to build a VXI system for the new array. This would benefit from the experience of the ICARE readout card development. Initial discussions with Charles Ring suggest a cost of about 200k.

4. Actions required

If, after discussion, this approach is adopted then then the following work will be required.

1. Arrange shipment and installation of chamber and beamline — JSL

2. Discussions on VXI cards and associated readout cards — SJAH

3. Case to NPC for required funds — BRF

Brian