

## **Minutes of the 2 July 1992 meeting on the PS wire scanner project**

Present: V. Agoritsas, J.P. Bovigny, E. Falk, S. Hancock (part time), F. Hoekemeijer,  
H. Koziol, G. Martini, J. Olsfors, Ch. Steinbach.

### **Reliability of wires and tests in the lab**

All the wires installed in the PS ring have been mounted with the original sockets in anodized aluminum. New fastening systems have been prepared for evaluation in the lab with ceramic beads and brass sockets. But the tests failed when the wire short-circuited to ground during the wire movement, preventing the observation of any subsequent breakage of the wire. It is believed that this short was due to the enameled connecting wire and not to the fastening itself. The test should be resumed as soon as possible with an improved version of beryllium wire and extended to a prototype carbon wire.

F. Hoekemeijer will provide in the near future:

- a spare operational unit with conventional beryllium wire, anodized socket and a drop of Araldite,
- a test unit with beryllium wire, brass sockets, ceramic bead and Kapton insulated connection wire,
- a test unit with carbon wire equipped in the same way as the beryllium test unit.

### **VME and specific electronics**

All the modules needed have been delivered, except the timing module TG8 which will not be available before the end of this year. The Axodyn power supplies has been extensively tested and works correctly. J. Olsfors has not finished the design of the printed circuit for the synchronization and excitation of the position resolvers. It is still hoped that it will be ready and tested during the second week of August, and that acquisition of the positions will be available before the end of that month.

### **Software**

E. Falk has developed most of the overhead and framework software. She has been designing it in a very flexible way, so that it should suit all forthcoming applications. She received advice from several people from the CO group, whom we thank for their collaboration. She has tested the controls of all the VME modules and written a first real-time task sampling the motor

velocity and stopping it when a preset value is reached. She demonstrated it at the end of the meeting.

### **Scintillators, optical filters, H.T. power supplies and P.M.'s**

Last year's first evaluation tests of the Hamamatsu R2238-01 photomultiplier performances had been very promising. One of them, coupled to a 10 mm thick, 75 mm diameter scintillator has just been installed again in SS 89 next to the vertical scanner (about 1m away and 45° production angle). Since measurements with negative particles are not requested this summer, It has been connected to the system electronics through the negative particles channel. This will allow further tests on the device, and a decision on the need for optical filters. The final design of the detector chain should be decided in September, so that the fabrication can start in time.

### **Mechanisms**

The 2 new mechanisms have been mounted by Ch. Corminboeuf, as were the previous ones. We could therefore benefit from his previous experience with full satisfaction.

### **Cables**

The list of cables must be completed by the end of July. G. Martini will centralize the requests and forward them to the ST division. The location of the various components of the system will be decided at the same time. It is suggested to install all the electronics in the CCR.

### **Conclusion**

The project is late compared with the planning of last meeting. This is mainly due to several difficulties: delicate operation of the motor drive power supplies, short-circuits of the wire during the lab tests and parasites induced by the motor on the Ethernet link, just to quote a few of them. The Summer vacations will not help. We must be very careful to avoid further delays. The next meeting is foreseen for the second half of September.

Ch. Steinbach

#### **Distribution:**

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