

EUROPEAN HYBRID SPECTROMETER (EHS)

Status Report on the Wire Chamber Detectors

I) Short Summary of the Drift Chamber Contact Meeting held between CERN, NIKHEF and Vienna.

On November 12th a further contact meeting took place between the above mentioned laboratories. W. Bartl, W. Kittel and L. Montanet reviewed the preparatory work going on in these labs. The preparations are progressing well. The 'NIKHEF council' has approved the budget for the EHS project. L. Mapelli<sup>1)</sup> reported on a vibration test done with a 35x45cm<sup>2</sup> MWPC, of conventional design, on the CERN RCBC vibrator. No destructive effects were seen. Nothing is known about fatigue effects. D. Toet<sup>2)</sup> presented an acceptance study. D. Edwards from the Daresbury Laboratory reported on a test done with large drift chambers equipped with wires of unequal length. The results are very promising. It is felt we should use chambers with  $\pm 30^\circ$  inclination and unequal length in the EHS setup. W. Heitsberger and M. Pernicka discussed cost and performance of the Verweij and Vienna readout system. - A discussion took place on the problem of number of planes per module, for the chambers in front of the magnet M2. A MC study is in progress, in order to compare a 4-plane versus 6-plane solution. G. Neuhofer presented a proposal on how to define the borderline and responsibilities for the equipment supplied by NIKHEF and Vienna to EHS.

II) Proposal on how to define the Borderline and Responsibilities for the Drift Chambers supplied by NIKHEF and Vienna.

a) Items supplied by these Institutes:

3 Drift chambers<sup>\*)</sup> equipped with amplifiers discriminators, signal cables, drift-time digitisers, decoders, control electronics, crates, power supplies, HV power supplies and distribution.

1 spare module without electronics.

The chambers will be tested and documented.

The running in and the maintenance can be done for a limited period ( $\frac{1}{2}$ -1 year, this is still under discussion) by the two institutes. During this period special personnel from CERN should be trained.

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\*) The outer dimensions are fixed, the number of planes is not yet known.

b) Proposed support from CERN.

The two Institutes would like to ask for the following items and support from CERN:

1. Common gas supply;
2. Rack space and cooling in counting house;
3. Data acquisition system including Camac interface and a general Camac system;
4. Programming support for the data acquisition system;
5. Access to a test beam by mid-1978 for 2-3 test periods. It would be desirable to have, at this time already, access to the final data acquisition computer, in this case some programming support would be necessary.

c) Things to be discussed.

No conclusion was reached on the question of the mechanical supports.

III) Contracts with the Pavia BC Group.

There have been contacts between P. Falk-Vairant, L. Montanet, A. Minten, G. Neuhofer and S. Ratti concerning the construction of the MWPC W0 and W1. There is some evidence that the group of S. Ratti will receive approval from INFN to spend about 100-150 KSF for EHS. As it is a very delicate job to fit W0 into the EHS setup, it is proposed to build this chamber at CERN. Therefore the Pavia BC Group should send from mid-1977, for about 1 year, 2 physicists to CERN in order to construct W0 together with the specialists from EF division. The less critical chamber W1 could then be built at Pavia.

G. Neuhofer

References:

- 1) A. Hervé and L. Mapelli, CERN-EF-EP/RCBC 76-18
- 2) D. Toet, CERN-EF-EP/RCBC 76-19