February 10, 1998
massimo/private/tex/projects/spectro/mtg9.tex

LEP SPECTROMETER PROJECT

Summary Notes of the 9th meeting held on 06 February 1998

Present: E. Bravin, D. Cornuet, B. Dehning, G. De Rijk, R. Genand, M. Hildreth, N. Hilleret, M. Hublin, W. Kalbreier, J. Montes, G. Mugnai, M. Placidi, E. Torrence, L. Vos, P. Wells

Excused: Y. Muttoni, R. Perret, J. Poole, F. Sonnemann, R. Valbuena

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09:07 - Comments to Summary Notes of previous meeting - None.

09:08 - Project status - The following points were covered:

1. **Design issues** - B. Dehning showed the present design of one of the three modules including a BPM and two Absorbers. Attention was drawn to the holders of the wire sensors on the BPM body and their position w.r.t. the median plane of the machine. A more direct fixing and a position closer to the horizontal plane are desirable **if this does not delay the production**.
   Each of three modules will be assembled in laboratory on their own stone supports and a final alignment will be performed on situ. Time for this operation is to be included in the planning (next meeting).
   N. Hilleret pointed out that the wire sensors are to be installed after the bake-out. It was also reminded that the BPM blocks are supposed to be thermally protected during the run.
   G. De Rijk asked about the shielding of the Earth magnetic field (0.5 G vertical component i.e. $\sim 5 \times 10^{-4}$ of the main field at 90 GeV) and its variations with time. Although the latter effect should be measured outside the magnet (it is automatically measured inside it) it should represent a $\leq 10^{-4}$ effect. A magnetic shielding of the apparatus is not foreseen at present Magnetic measurements could nevertheless be implemented.
   Answering a question from N. Hilleret, B. Dehning said that the reduced thickness of the bellows ($\leq$ 0.1 mm stainless steel) should guarantee adequate attenuation of the train currents on the vacuum chamber.
2. **09:35 - Instrumentation** - B. Dehning also reported on the instrumentation required for the several measurements and controls (see attached slide). The thermal control of the BPMs is being finalised as well as the general cooling. He mentioned that the BPM electronics will be installed in the technical alcove at about 200 m from the spectrometer.
   NMR electronics is to be close to the magnet and an adequate protection against radiation must be provided (see G. Mugnai's presentation).
   M. Placidi pointed out that it would be useful to measure the spectrum and amplitudes of the mechanical vibrations mainly induced by the water cooling circuits. The installation should will be planned in order to leave **a few days**

before the LEP start up (April 24) for these measurementsto be done with all the utilities functioning in order to reproduce the operational environment in the tunnel.

3. **09:45 - Magnetic monitoring in MB2S** - G. Mugnai gave a complete overview of the instrumentation foreseen for the magnetic measurements in the two MB2S concrete dipoles in 1998. They include 4 NMR probes and a local Flux Loop. The associated electronics (one VME crate and a magnetometer) must be installed close to the magnets inside a lead hut to ensure adequate radiation shielding.
   The proposed "hut" looks massive (0.85X0.80X0.80 m^3, $\sim$4 tons of lead) and it is supposed to be suspended over the vacuum chamber (see slides). The solution will be revisited for optimisation checks.

The meeting ended at 10:03.

The **NEXT MEETING** will be held on

WEDNESDAY, Feb. 18^{th} 1998 at 09:00
in ROOM 866/2-D05

<u>NOTE UNUSUAL DAY AND PLACE !!!</u>

AGENDA

- Comments on Notes of previous meeting
- Follow up of layout and production — Y. Muttoni and/or B. Dehning
- Magnetic mapping: needs and schedule — Discussion
- MBI magnet issues — G. De Rijk
- Planning 1998: update — J. Montes
- DAQ and analysis — M. Hildreth and/or E. Torrence
- AOB (Guide lines for a Report)

M. Placidi