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http://www.cern.ch/LEPECAL/spectro/minutes/1999/mtg26.ps

LEP SPECTROMETER PROJECT

Summary Notes of the 26^{th} meeting held on March 4, 1999

Present: W. Coosemans, D. Cornuet, B. Dehning, M. Hildreth (chair), W. Kalbreier, J. Montes, Y. Muttoni, J. Prochnow, F. Roncarolo, G. Wilkinson

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Comments to Summary Notes of previous meeting - None

Update on Hardware Status - Y. Muttoni gave an overview of the progress in the hardware installation. The BPM stations are now in the tunnel and the concrete grout under the limestone blocks is being poured. The vacuum chamber will be placed between the pickups after this. The other small pieces for the WPS are being assembled and can be test-fitted on the spare BPM station. The dipole will now move down to the tunnel on the 15th of March, rather than the 12th, in order to give us the weekend for final magnetic measurements and tests. Special care is being taken between Bernd, Yvon, and Guiseppe that all of the necessary connections and hardware will be present in the tunnel when the dipole is moved so that magnetic measurements can begin *in situ* as soon as possible. An extra check on the pickup alignment will be made when the magnet is surveyed. This is in order to measure their positions after any settling has occurred with the freshly- poured concrete bases.

Status of BOM and WPS systems - B. Dehninggave a brief report, saying that the discussions with Bergoz are continuing, and that there will be another meeting with their engineering team in a couple of weeks. The WPS system has been ordered and should arrive in time. Installation of both systems should be straightforward, since they were already installed once last year.

Results from ISR Mapping - M. Hildreth showed some of the recent results from the mapping measurements in the ISR. First, he showed that the relationships between the fields measured by the four reference NMRs are essentially constant, and independent of temperature, whether or not the magnet is insulated, ramp speed, etc. Also, the one Type 2 NMR probe that was changed seems to be measuring the same local field better than a part in 10^{-6}. Mike then showed the reproducibility of the core and total integral as predicted by the reference probe fields. For the core integral, the reproducibility is better than 1×10^{-5} with *no* correction for temperature. For the total integral field, two bands appear in the residuals to the linear fit. It was found shortly after the meeting that they are due to the temperature difference between the coil and the core when the temperature of the coil is increased to 40 degrees. The coil has a larger temperature coefficient, and its temperature changes by a larger amount when the cooling setpoint is changed. When a correction is introduced for this effect, the resulting data has a scatter smaller than 5×10^{-5} at all energies; the scatter gets smaller at higher energies. W. Kalbreier expressed his congratulations to the mapping team for their hard work in achieving this precision, which we hope will improve when the final analysis is finished.

Mapping Schedule - Mapping with the carbon fibre arm finished on Tuesday, 2 March, and preparations began to install the "mole" in a dummy vacuum chamber in the MBI dipole. The system was operational by Friday, 5 March. It is planned to make maps with this system until approximately 11 or 12 March, at which point tests using the rotating coils of O. Pagano will commence.

The next meeting will be after Easter, to be scheduled...

M. Hildreth