E.R., 22. July, 1997

Notes on the

3nd Meeting of the COMPASS Technical Board

July 21, 1997
corrected 16. October 1997

Beam calculations (L. Gatignon)
The calculations presented in the previous TB that the polarized target should be pushed back by 35 m (beam height 2.86+0.32 m) with respect to its position in SMC, in order to provide the beam properties requested by the various COMPASS programmes: this position would create problems for the excavation needed by SM1 and reduce dramatically the space available at the end of the hall.

On request from the collaboration, a new beam line was simulated, with the 2 CEDAR Cherenkov detectors installed in the tunnel: a gain of 8 m seems possible (same beam height as in the previous calculations), but with some question marks concerning the supports for the CEDAR's and the optimisation of the hadron beam. A further optimisation of the parameters could may be allow the gain of 1–2 m without serious loss in the beam quality, but definitly not the additional 10m wished by the collaboration.

Magnet design and dismounting of the present target system
(J. Kyynäräinen)
The most recent design of the super conductive solenoid was presented and distributed: the end of July is the dead line for the final comments. An easy modification of the platform was also proposed. Part of the equipment of the polarised target was removed; the cold box was disconnected but not removed because it could remain in the present position and be connected with longer tranfer line (cost 4 kCHF/m). For the beam test, in case one would use the SMC magnet, it could be possible to cool it down using two 500 ℓ He Dewars; to proceed to this operation, an expert must be found.

SM1 calculations (S. Paul)
F. Bergsma (PPE-EC) calculated in 3 dimensions with TOSCA the B field of the OAFM magnet equipped with shield plates (Proposal from W. Flegel); G. Mallot provided the plots.
The stray field looks reasonable for the targets and the RICH, but, due to the magnet lenght much larger than in the Technical Proposal, a lot of questions subsist concerning the tracker detectors and their position.

T.O.F.(E. Rosso)
A very recent design proposed by P. Shagin was presented: it shows a minor incompatibility with the polarised target platform (rather easy to be solved), but a major

one with the W. Flegel Proposal for SM1. S. Singovski is going to study both a new design and possible alternative solutions for the T.O.F. detector.

Distance between Muon stations (M. Sapozhnikov)
In the present design, the space allocated to the muon station between the Calorimeter and the Fe screen is 19 cm long. Recent simulation showed that, in order to get the correct probability of muon identification (> 90 %), a distance of ca. 65 cm would be needed between the X and the Y Al tubes detectors of the station. In order to take into account this requirement and the construction parameters of the Al tubes, one should increase by ca. 1 m the space allocated. In the discussion it was suggested to subdivide the Fe Filter into two parts of 50 cm each and insert one of them between the X and the Y sub-stations. It was also stressed that one should even try to reduce the lenght of the set up by ca. 1 m in order to fit in the MonteCarlo. *corrected version*

RICH Status Report (S.Dalla Torre)
A presentation is foreseen in the general meeting.

Test of 12 μm Si detector prototype (S.Masciocchi)
The prototype is going to be tested next week at X5; also a set of GEM+MSGC's provided by the F.Sauli team will be installed in the same set up and tested. The need of a team working at the Si strip project, looking at the Test Beam results and studying the various options (electronics, mechanics,...) was strongly stressed.

Tracking (Micromegas) (S. Platchkov)
A presentation is foreseen in the general meeting.

Cleaning of Bldg. 867(E. Rosso)
In the recent negotiations for the space at CERN, COMPASS has obtained the assignment of the large Clean Room at Bldg.867, waiting for the new construction promised by CERN. It is nevertheless compulsory to proceed to the cleaning of the rest of the area formerly assigned to NA47; all the colleagues still having material stored there, were invited to proceed, by the end of July, to a strict selection and save only the equipment which is going to be used in the near future. It was also stressed that the Clean Room cannot be considered as a normal storage area.

These notes can be found on the Web under
URL `http://wwwcompass.cern.ch/compass/tech-board/`.