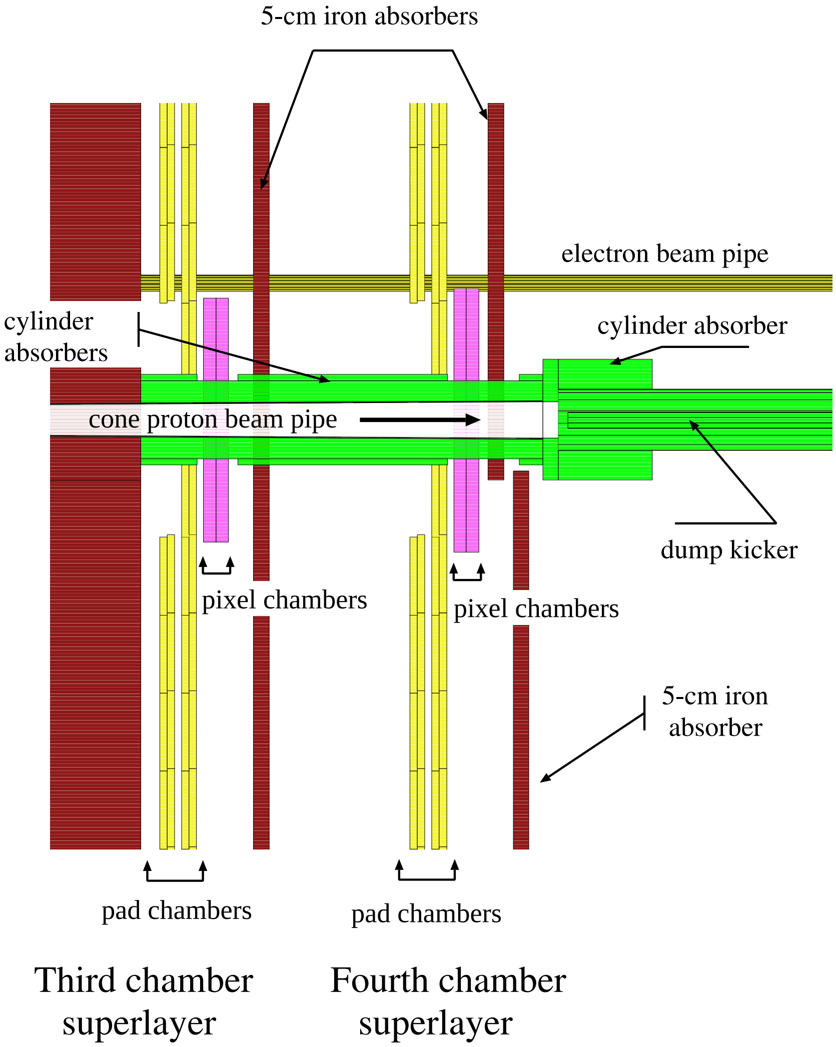

Figure 8: Top view (horizontal cut at y=0) of the RUN-98 muon detector in the region of third and fourth muon superlayers.

the case of RUN-96 geometry. A superevent is defined as a mixture of b-bbar and mininimum bias events which are merged according to a Poisson distribution with the mean values 1 and 4 respectively, b-bbar events are selected when $B^0 \rightarrow J/\Psi K_s^0$ and J/Ψ decays to $\mu^+\mu^-$. The sample for the RUN-98 geometry contains 1000 superevents. The sample for the RUN-96 geometry contains 10000 mininimum bias events.

Fig.14 shows the momentum distributions of particles producing hits in the RUN-96 muon detector. Negative momenta are assigned to the particles moving backwards and entering the back side of the chamber, whereas those with positive momentum move forward and enter the front side of the chamber. Most part of hits (83%) is produced by electrons. Fig.14-a shows a momentum distribution of these electrons. The gap at zero momentum is due to the GEANT low momentum cut. 79% of the electrons have momenta less 10 MeV/c. Figures 14-b and 14-c show the momenta of muons and hadrons producing hits in the muon detector. The momentum scale of these distributions is larger and only a small part of the hits are produced by muons and hadrons with momenta less 10 MeV/c. Fig.14-d shows the mean pad occupancy for the chamber #7 (see fig.2) as a function of the HBGEAN low momentum cut. Pad occupancy for

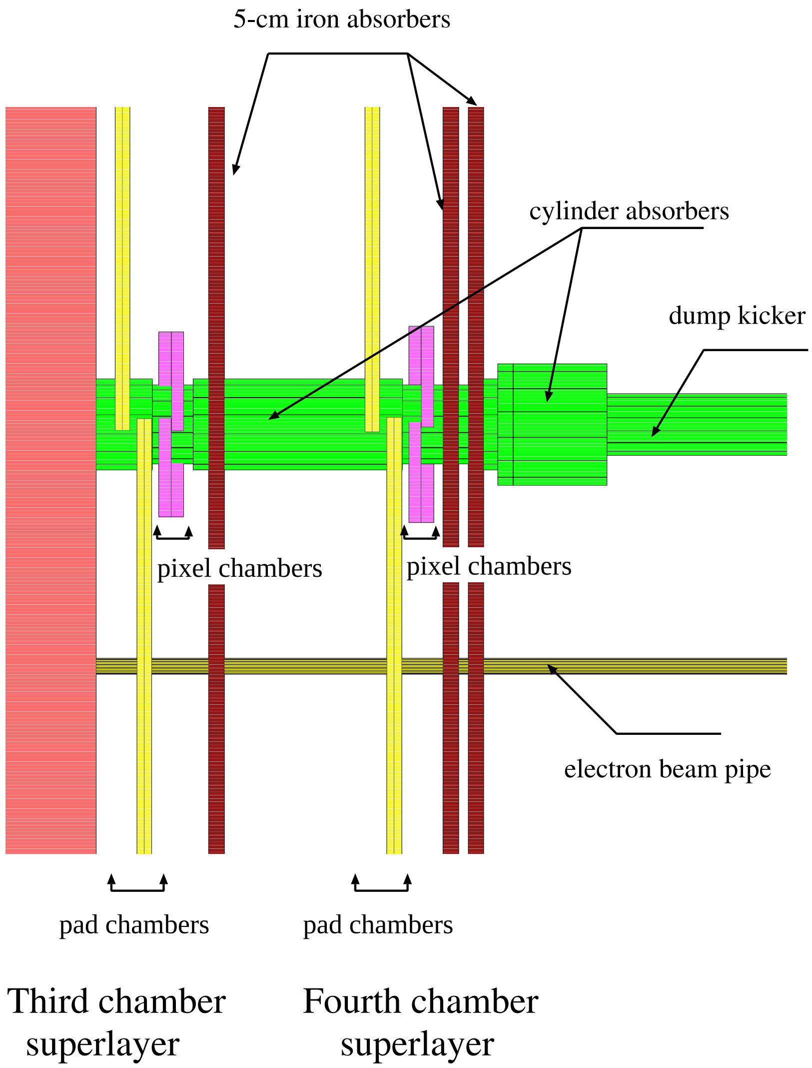

Figure 9: Side view of the RUN-98 muon detector in the region of third and fourth muon superlayers.

chamber #7 was measured in December 1996 and the results were reported by M.Titov at the February 1997 HERA-B meeting [3]. The measured pad occupancy is indicated in fig.14-d. As seen the mean pad occupancy strongly depends on the HBGEAN low momentum cut and the calculated occupancy is in agreement with the measured one if the low momentum cut is equal to 4 MeV/c. M.Titov had shown [3] that all measured distributions are in good agreement with the calculated Monte-Carlo distributions.

Fig.15 shows the momentum distributions of particles producing hits in the RUN-98 muon detector. Again most of the hits (66%) are produced by electrons. Fig.15-a shows a momentum distribution of electrons and again 83% of these electrons have momenta less 10 MeV/c. Figures 15-b and 15-c show the momenta of muons and hadrons producing hits in the RUN-98 muon detector. Only a small part of the hits are produced by muons and hadrons with momenta less 10 MeV/c. Fig.15-d shows the mean pad occupancy in superlayer 3 as a function of the HBGEAN low momentum cut.

The occupancies are calculated for the RUN-98 detector geometry using 4 MeV/c as HBGEAN low momentum cut. Figures 16-a and 16-b show the occupancies per wire for the tube chambers as a function of the minimal distance between the wire and the proton beam, whereas figures