ALEPH 89-20
MINIV 89-3
G. Triggiani
7.2.1989

MINI-VERTEX MEETING

Minutes of the meeting held on January 20, 1989

Present: G.Batignani, H.Dietl, E.Focardi, F.Forti, M.A.Giorgi, G.Lutz, H.G.Moser, A.Schwarz, R.Settles, G.Triggiani.

MECHANICS - F. Bosi completed the sector design, which is now settled. Thus, the mechanical design of the Minivertex detector is complete. A program is being written to automatically countersink the carbon fiber sector frames. R.Settles reports that the gadget for holding the insertion strings has been designed and it's been machining. It's made out of rectangular section steel and hexagonal in shape, this simmetry coming from 2 (TPC feet) x 3 (VDET sectors). It will be ready by the end of the month. We have to think about the sector shielding against electromagnetic induction, the first guess being that an aluminum foil, 25 μm thick would fit.

DETECTORS (Pisa) - M.Giorgi reports that the full last lot of detectors has been tested. The grand total is now of 18 good detectors, where good means that less than 2% of p^+ strips show a reverse current higher than 20 nA. G.Lutz points out that this doesn' t exclude the presence of some hot spot on the n^+ side of the same detectors. The not accepted detectors behaviour is mainly due to: a) photolitography defects and b) mask misalignments which lead to direct metal-bulk contact on the junction side. This is confirmed by optical inspection and electrical test.
E. Focardi tried the resistive layer deposition in Pisa using thermic evaporation, and in CSEM with silicon RF sputtering. The first method shows a bad contact due to the aluminum oxydization, the crystal which underwent the second method has not been measured yet.

DETECTORS (Munich) - 20 detectors from the last batch have been scanned using an automatic probe station, which made this job completion possible in 2 days only. Strips with contact problems were 19% on p^+ side and 6% on n^+ side. 6% of strips on p^+ side and 2% of strips on n^+ side are really in contact (no AC coupling), the rest are strips shorted with other strips.
The new production line has started producing detectors with very few pinholes (4÷6 / detector).
The total dark current seems stable now, even if this has not been extensively tested. The shielding between the detectors and ceramic support (25 μm aluminum + 50 μm mylar) strongly reduces the pedestal variations previously noticed.

CABLING & CONNECTORS - Connectors have been ordered and an official request has been sent to install 60 32-meter cables (30 on each side) from the patch panel to the barrack.

LABORATORY EQUIPEMENT - H.G. Moser presents a list of items needed in order to have the Minivertex laboratory at CERN properly equipped. The main items in the list that have to be ordered are: a) a VAXstation, b) a microscope, c) a μ-bonding station.

POWER SUPPLY - A new prototype has been delivered by Laben, which seems to be free from the troubles that affected the first one. A 50 Hz component is still present on the HV. H.G. Moser points out that the final version must have a proper interface to the slow control system.

NEXT MEETING - The next meeting is fixed on February 2, 14:30 in the Aleph conference room.