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2200

MEETING OF SUMMER STUDY GROUP ON CHARGED PARTICLE BEAMS

T. G. Walker

June 25, 1968

Present: A. Read, R. Steining, W. Toner, H. White, T. G. Walker

1. Background muons: It was felt that a minimum length of beams is determined by the size of the muon shield downstream from the target. The effect of stray muons in the experimental apparatus does not appear serious.

2. Bill Toner will prepare a written consideration of the effects of such things as transverse momentum, phase space, etc., to beam design.

3. A discussion was held in which two experimental approached were considered. These were:
   a) a high intensity beam $\sim 10^8$ particles with good optics, no detectors in beam, and
   b) lower intensity beam in which the momentum and/or direction of each beam particle can be determined.

   It was recognized that the physics may be different in these experiments.

4. A further class of experiments were briefly discussed. In these, both particles in a 2 body interaction are detected.

5. In a discussion on the target station the following points emerged:
   a) 50 feet from experimenter's target to adjacent beam line is O. K.
   b) longest beam line ~500 feet
   c) Target station hall might be ±100 feet wide and 500 feet long. To accommodate the experiments which may bend as much as the beam line, the figure of ±100 feet may need to be doubled particularly downstream.
   d) The operation of several beams simultaneously from one target requires some cooperation among teams. Momentum independent beams certainly ease the problem.

Next Meeting: 9:30 Friday, June 28, 1968

At this meeting it is planned to complete Phase I which is a consideration of experiments using charged particle beams. Phase II involves the specification of the beams required and their properties. During Phase III magnet properties and a target station layout will be specified to meet these requirements.