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PROPOSAL FOR A STUDY OF LARGE TRANSVERSE MOMENTUM PHENOMENA

USING THE SUPERCONDUCTING LOW- $\beta$

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An experiment is proposed to study High Transverse Momentum Phenomena at the ISR. It is a modification of the currently running R 108 experiment, incorporating a larger solid angle electron and  $\pi^0$  detector and an improved chamber system. The apparatus consists of a superconducting solenoid containing five double gaps of drift chambers. Two lead glass arrays and 4 MWPC's with cathode strip readout for pulse height measurement are located outside the magnet.

The physics objectives are

- 1)  $e^+e^-$  pair production to check scaling above  $10 \text{ GeV}/c^2$  in mass.
- 2) Single  $\pi^0$  production up to  $p_T \sim 20 \text{ GeV}/c$ .
- 3) Jets and multiparticle production.

The experiment requires the use of the superconducting low- $\beta$ . With the resulting increase in luminosity and an increased acceptance the sensitivity of the proposed experiment for  $e^+e^-$  pairs is expected to be 8 times that of the present R 108 experiment.

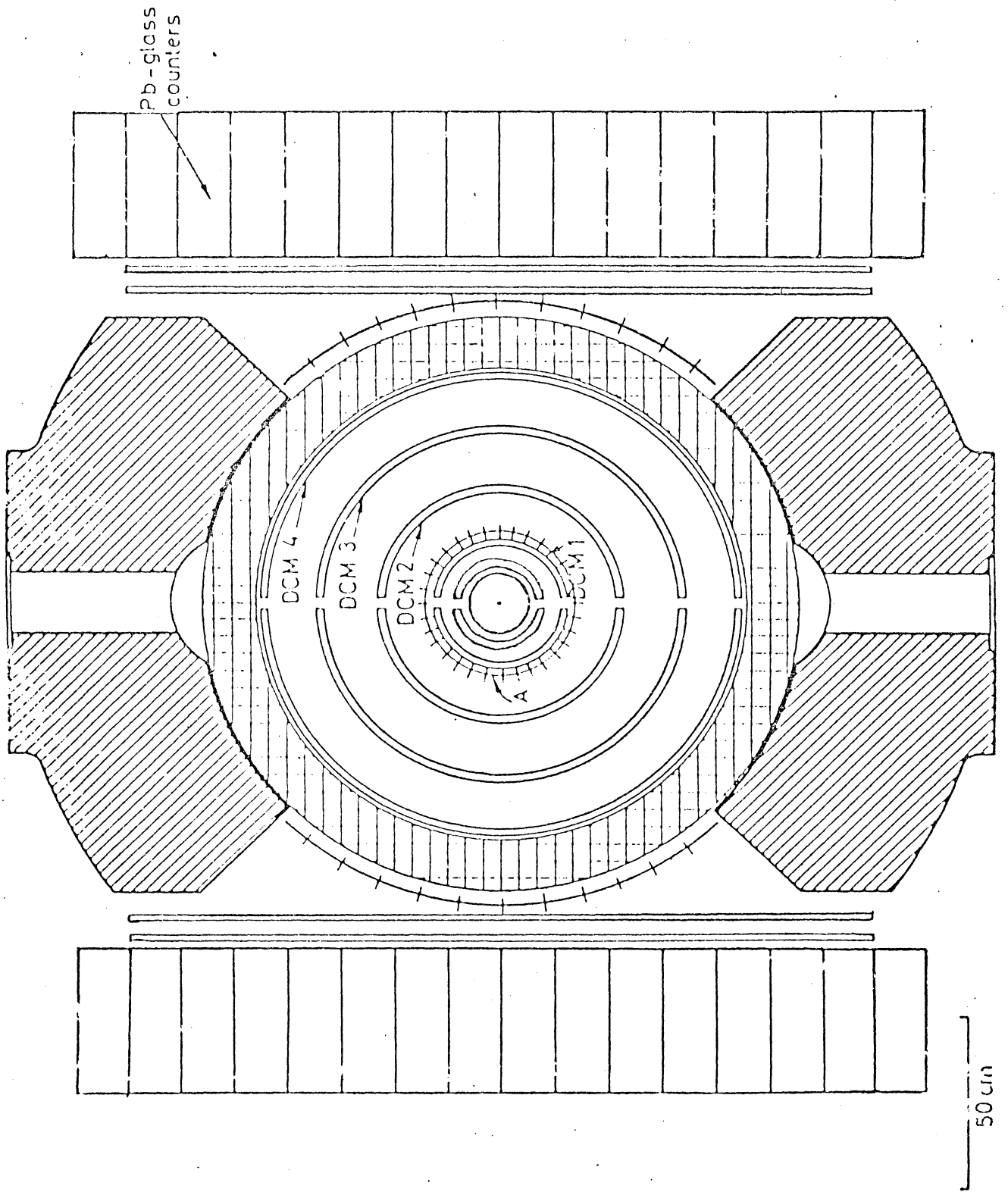


Fig. 1a