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Tune measurements using computer fit to perturbed orbit

M. Q. Barton

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Collider Accelerator Department

Brookhaven National Laboratory

U.S. Department of Energy

USDOE Office of Science (SC)

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Some time was made available by bubble chamber problems. Starting at ~ 11 am... I worked on a computer program to measure injection ν-values using a variation of a technique developed earlier. That system depends on curve fitting the orbit as influenced by a perturbation to a known form. Currently many electrodes are missing, and the usual bump techniques are rather difficult at injection fields so this method is almost unuseable. The new version used only the #15 electrodes of which there are still 9. Orbit deformation is done by switching d.c. dipoles and taking two complete orbits with dipoles in two states. a version LOWHN does horizontal orbits and LOWVN does vertical. The programs work but the accuracy is poor (~±0.05 ν units). Nonetheless - they show we are capturing in a region $\nu_H \sim 8.9$, $\nu_V \sim 8.7$ probably undesireable.