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Tune measurements using computer fit to perturbed orbit

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Studies - Dec 1, '73

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Blumberg
NO. 487

Some time was made available by
puff chamber problems. Starting at ~ 11 am...
I worked on a computer program to measure
injection v -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
~~so~~ many electrodes are missing, and the usual
bump techniques are rather difficult at injection
fields so the method is almost unusable.

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 ($\sim \pm 0.05$ v units). None the less -
they show we are capturing in a region

$v_H \sim 8.9$, $v_V \sim 8.7$
probably undesirable.

