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Phase Rotation with Induction Linac

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- History & near future

'96 Snowmass for $\mu^+\mu^-$ collider 1 bunch All RF

'99 LBL Frontend Workshop CASE1 RF + minicool + Ind. Linac
CASE2 Ind. linac + minicool + Ind. Linac

'00 Fermilab Feasibility study Ind. linac + minicool $\mu/p = 0.19$

'00 CERN study RF + cooling + ... $E_{kin} < 0.4 \text{ GeV}$

'01 BNL Feasibility study RF + minicool + Ind. Linac

- Use 100 m x 2 MV/m Ind. Linac

- Tools ($\sim 10\%$ loss?)

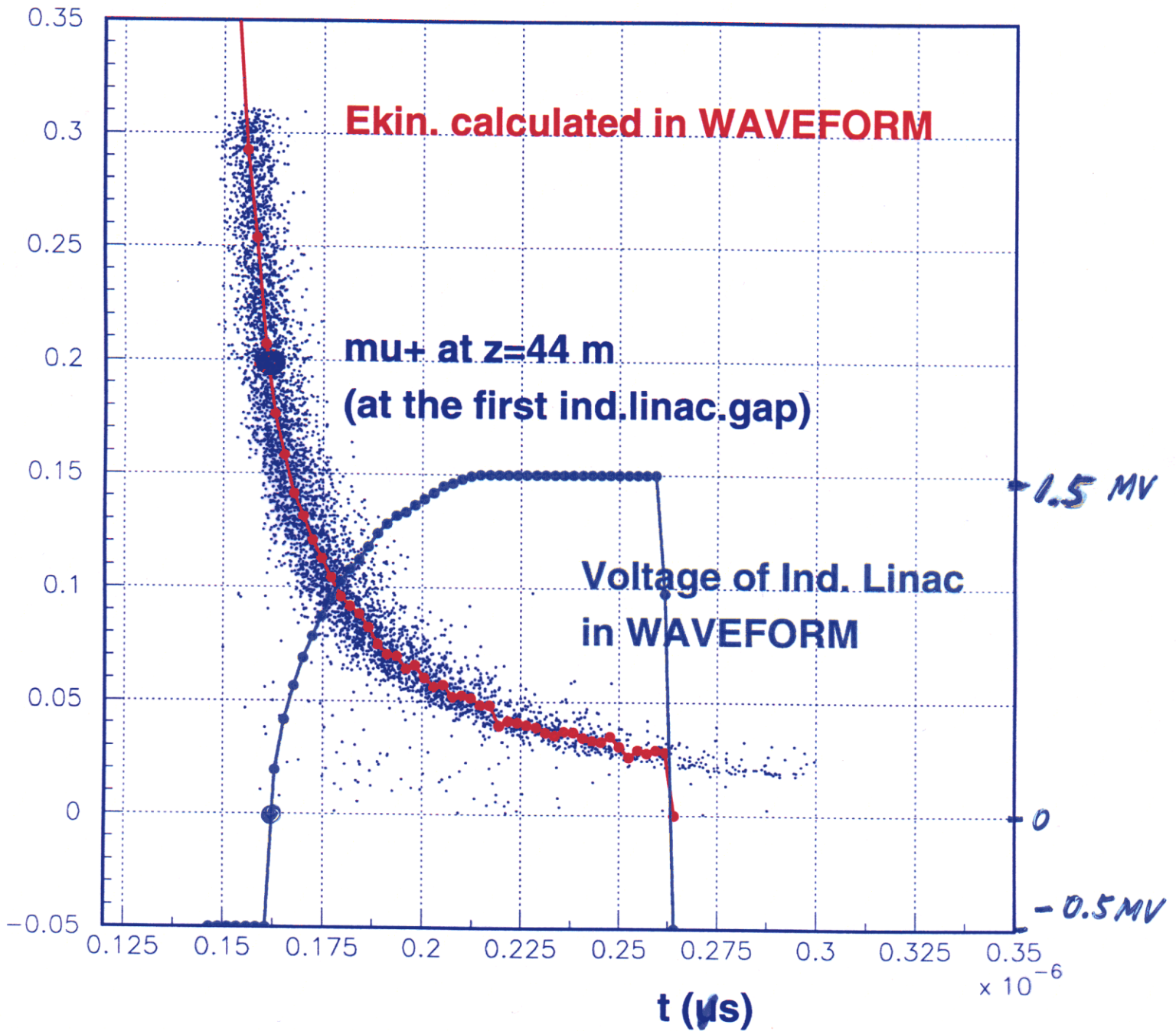
MARS 2ndary π at $Z = 4\text{m}$ 16 GeV Proton on 2λ C
50 mrad angle

ICOOL v 2.4+

{ waveform (automatic E_{kin} vs t curve)
spin tracking $\mu/p = 0.12$ $E_{kin} \leq 0.3 \text{ GeV}$

(DPGEANT (GEANT3+))

E kin. (GeV)



Kin. Energy (GeV) of μ^+ and π^+

