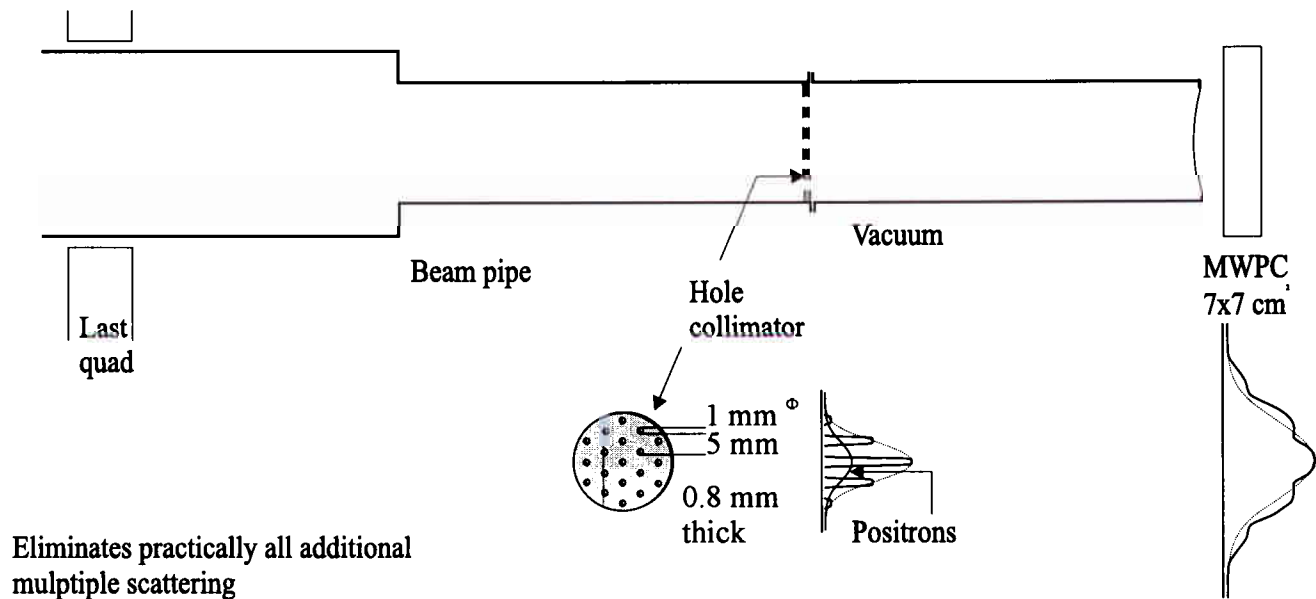
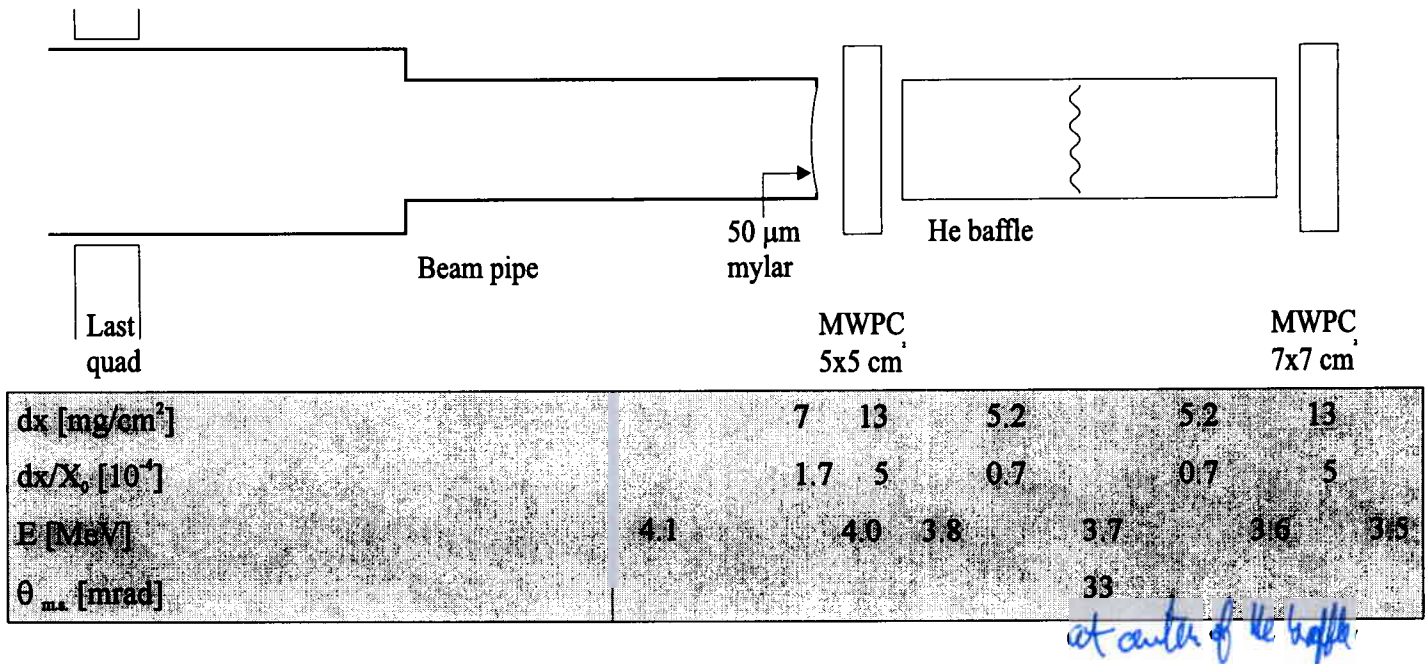


H.C. Waite, E 614 Beam Subgroup meeting, 2007/06/12

Beam emittance measurements

Assuming beam emittance of $80 \pi \text{ mm mrad}$ ($\theta=20 \text{ mrad}$, $x_0=5 \text{ mm}$)



Removing positrons from beam by mylar foil at slit 1 or 2 ?

With a dispersion of $\sim 12 \text{ mm/\%}$, degrading muons by 2% in momentum (4% in energy, displacement 24 mm, corresponding to $\sim 4.2 \text{ HWHM}$) requires 11 mg/cm^2 mylar at intermediate focus (slit 1 or 2). This causes additional multiple scattering of 20 mrad, i.e. increases the beam divergence (depolarization) by 40%.