Proton Position Tracking

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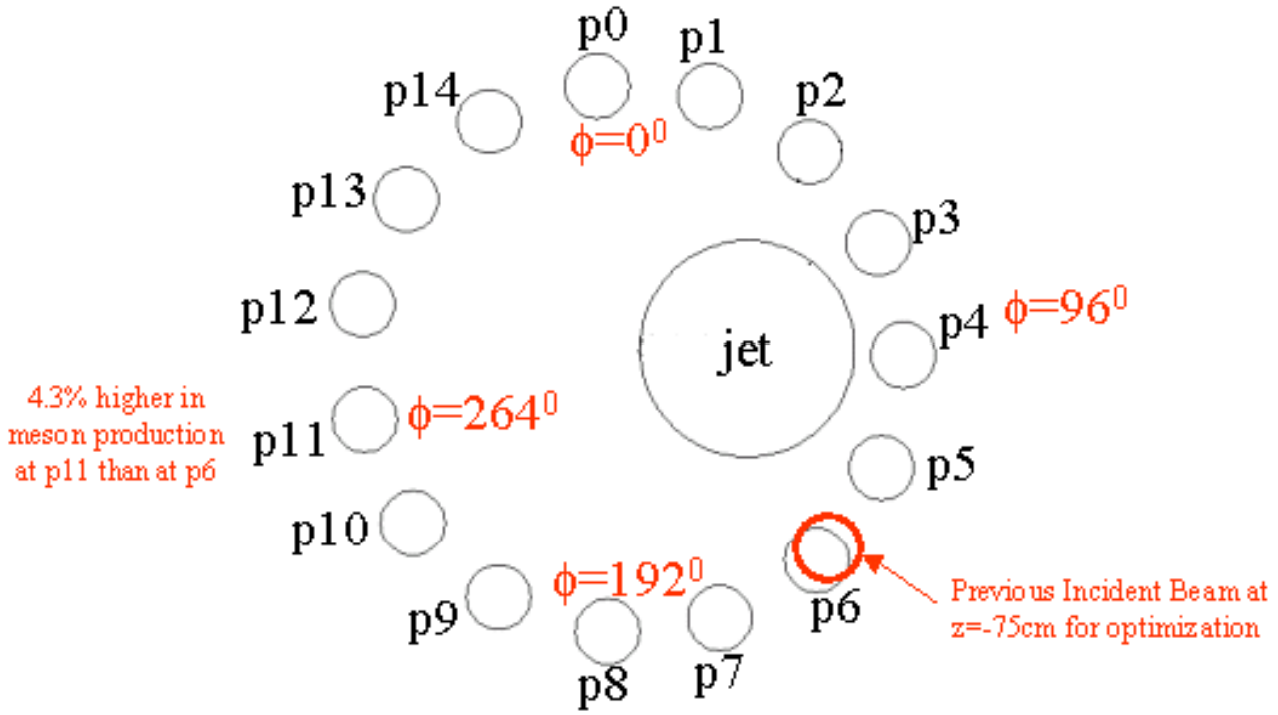
Multiple Proton Beam Entry Directions

The Required Beam Position at z=-75cm to Keep Same Crossing Angle and 24^0 Roll Angle Apart at z=-37.5cm



Hg Jet: *(0, 3.64, -75)*

r_j=0.4

θ_j=96.68 mrad

P0: *(-0.56, 4.62, -75)*

θ_b=123.73 mrad

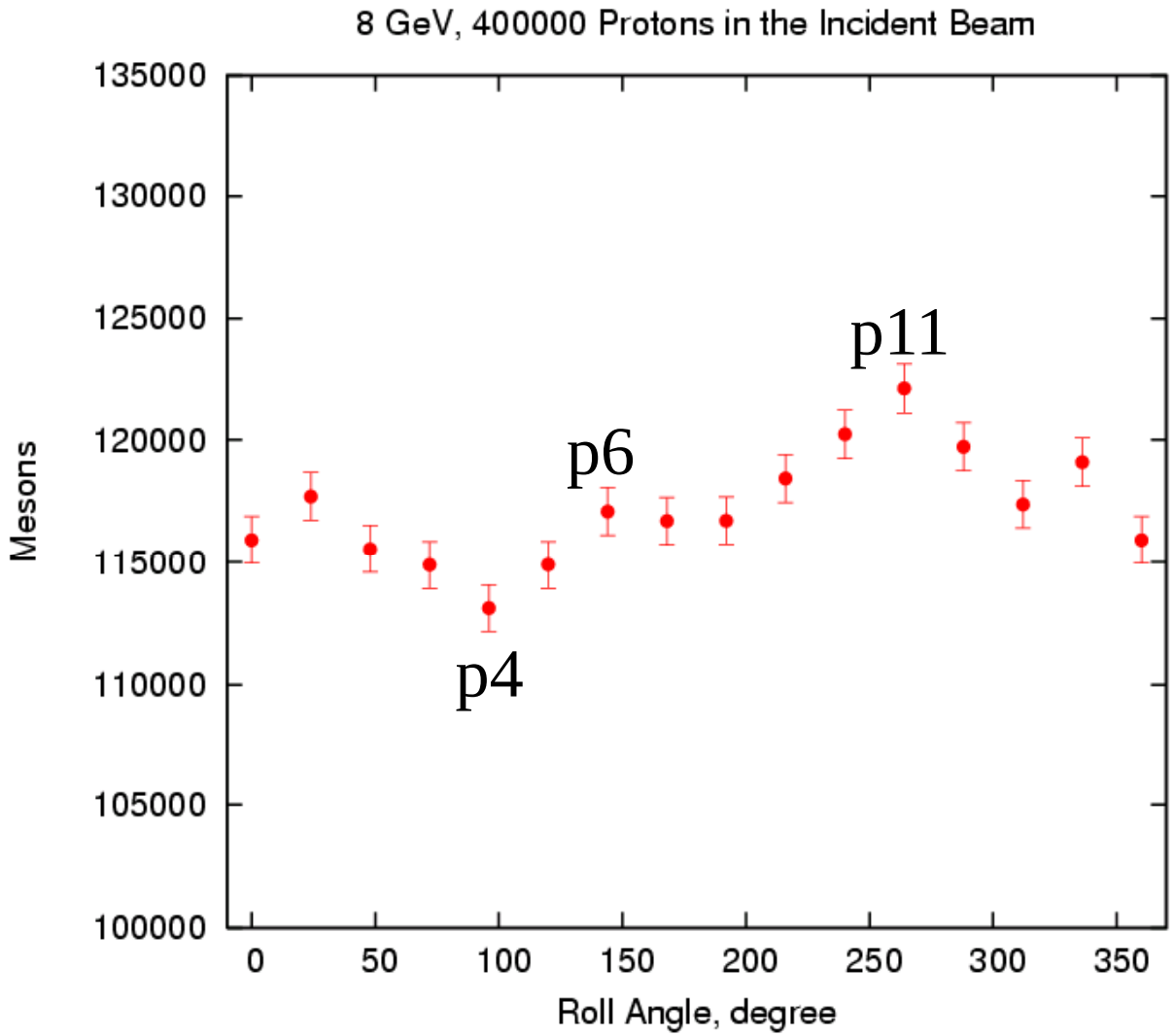
P7: *(-0.103, 2.638, -75)*

θ_b=70.45 mrad

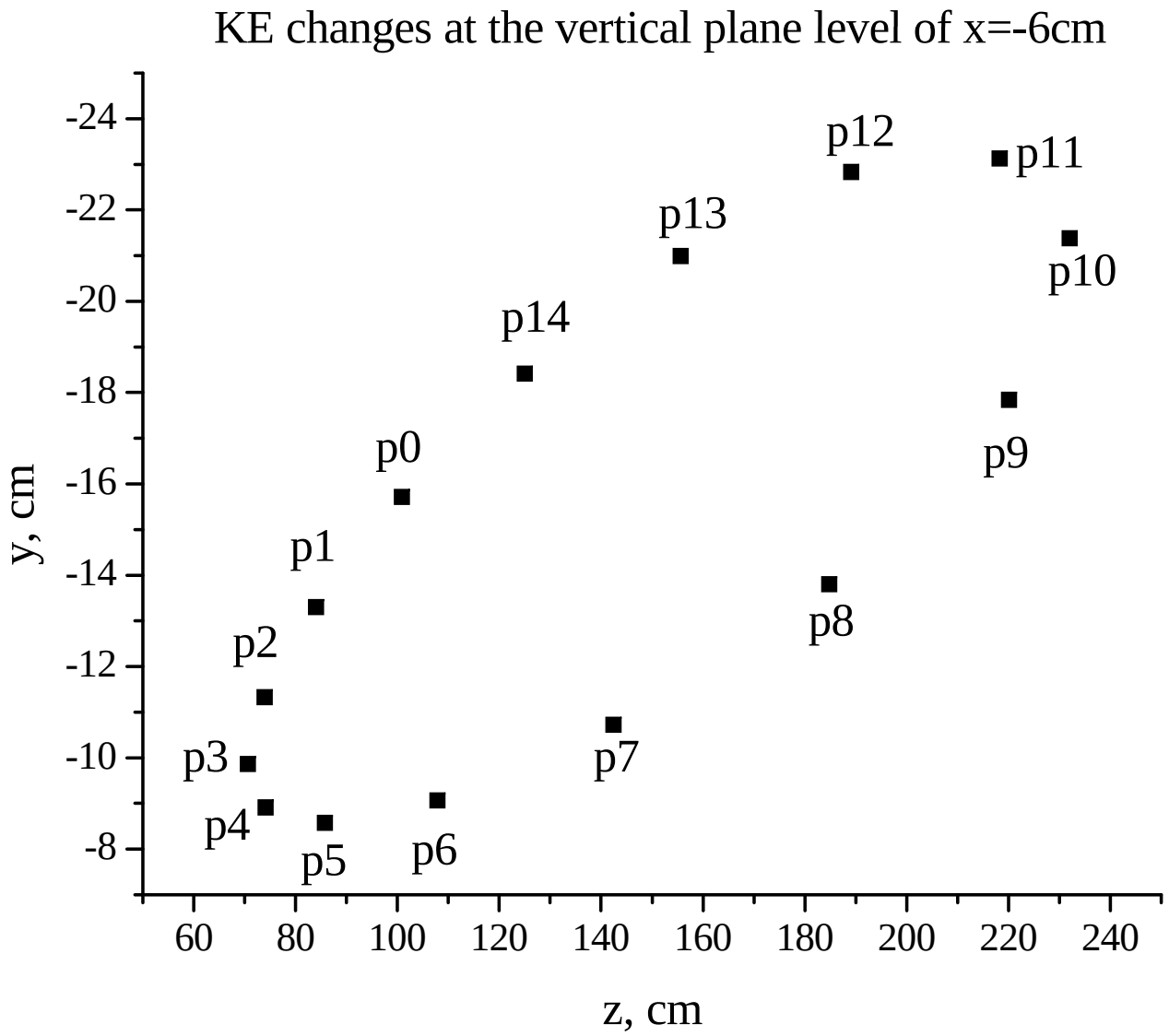
All entry directions of Hg jet and proton beam which have small angles to solenoid axis are down at z=-75cm

Multiple Proton Beam Entry Directions

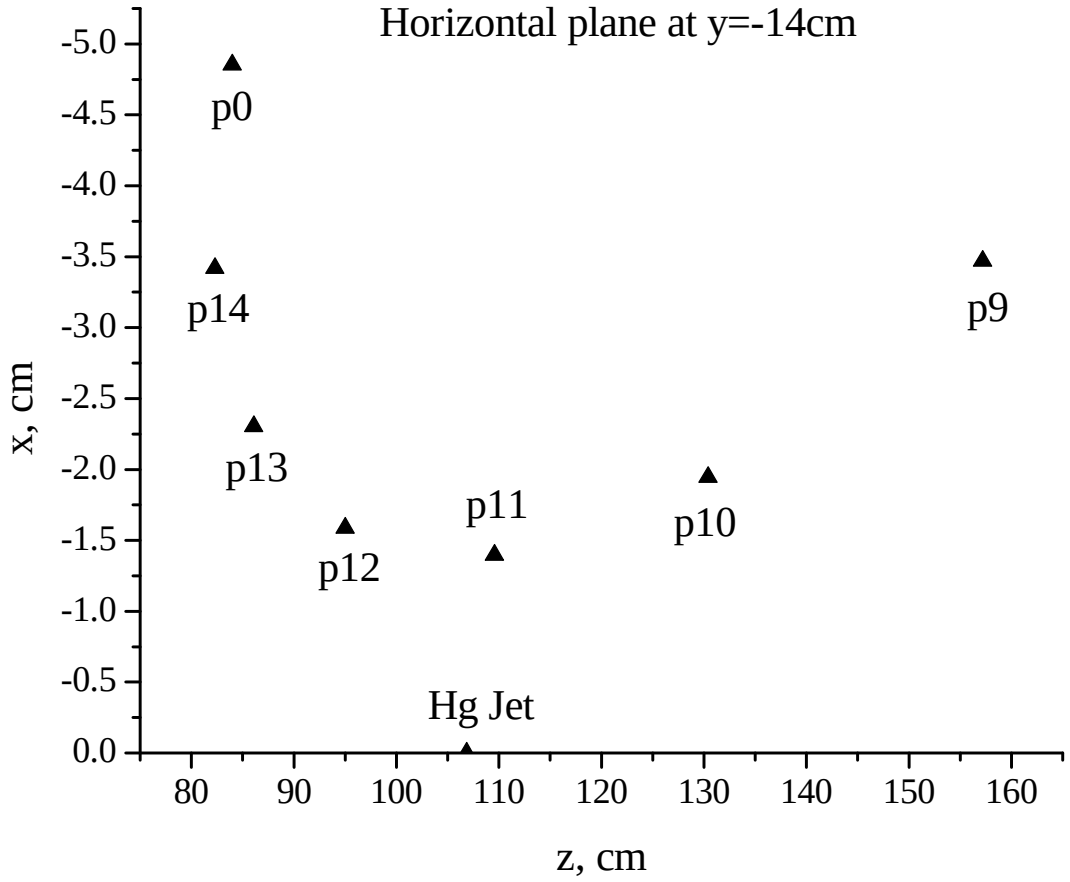
Meson 40MeV<KE<180 MeV at 50m for Same Crossing Angle and 24^0 Roll Angle apart at z=-37.5cm



Beginning position where the beam hits a vertical plane

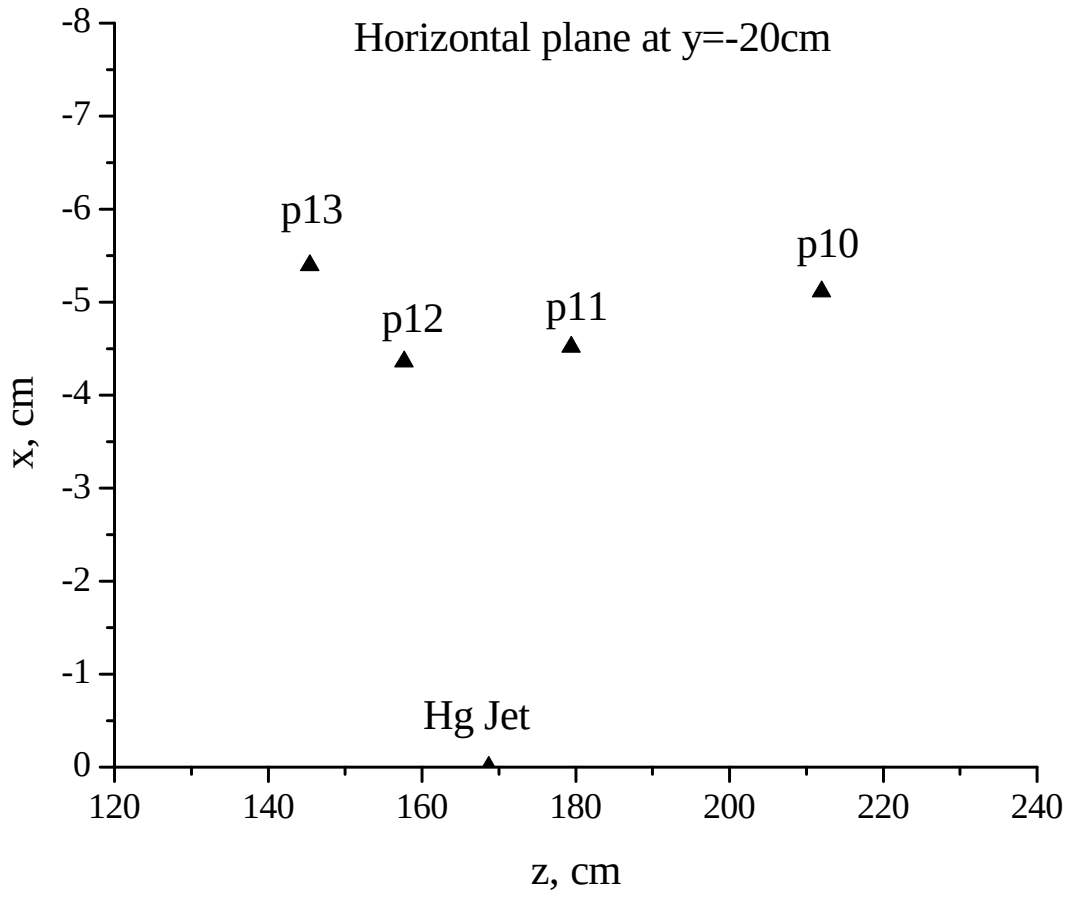


X-Z plot of launched protons which meet horizontal plane at y=-14cm



Hg Jet	(0, -14, 106.86)
p0	(-4.85, -14, 84)
p9	(-3.47, -14, 157.2)
p10	(-1.94, -14, 130.4)
p11	(-1.40, -14, 109.6)
p12	(-1.59, -14, 95)
p13	(-2.3, -14, 86.1)
p14	(-3.42, -14, 82.3)

X-Z plot of launched protons which meet horizontal plane at y=-20cm



P10 (-5.1, -20, 212)	atan(py/pz) 3.98^0
P11 (-4.52, -20, 179.4)	atan(py/pz) 4.69^0
P12 (-4.36, -20, 157.7)	atan(py/pz) 5.23^0
P13 (-5.4, -20, -145.4)	atan(py/pz) 5.52^0
Hg Jet (0, -20, 168.72)	to sol. axis 5.54^0