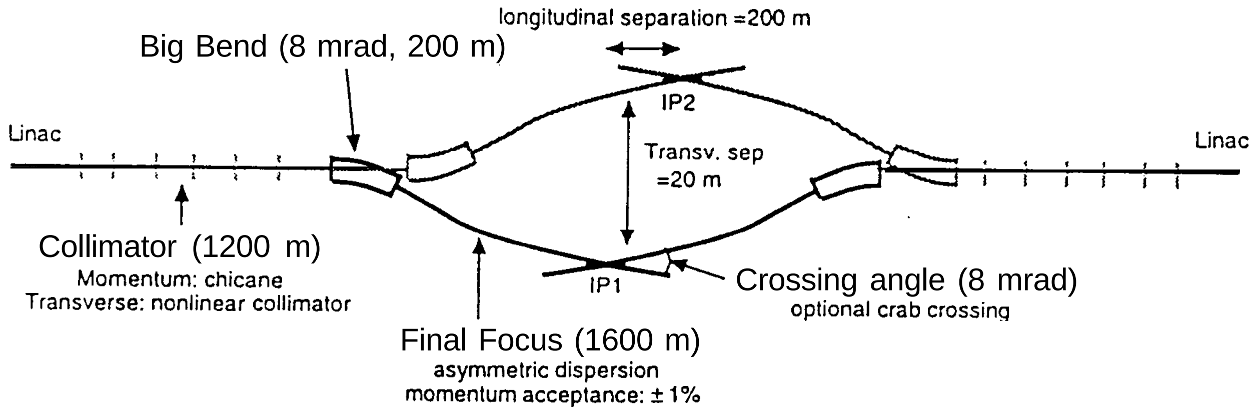


Figure 13.1: Schematic layout of the beam delivery system.

Background

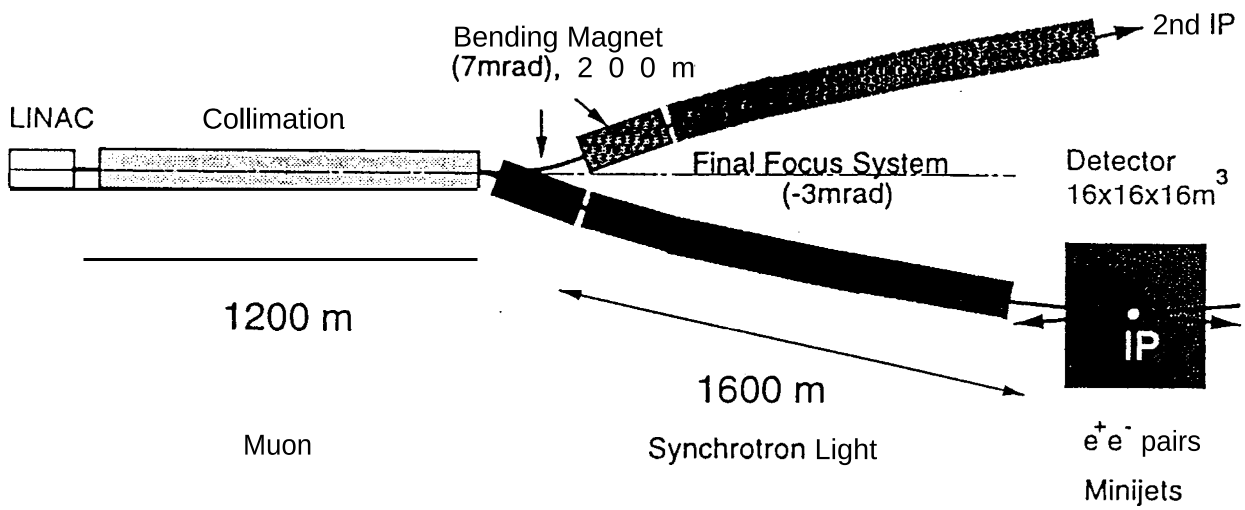


Figure 14.1: Top view of the beam line from the exit of the main linac to the interaction point (IP) $E_{cm} = 0.5 - 1.5$ *TeV.*

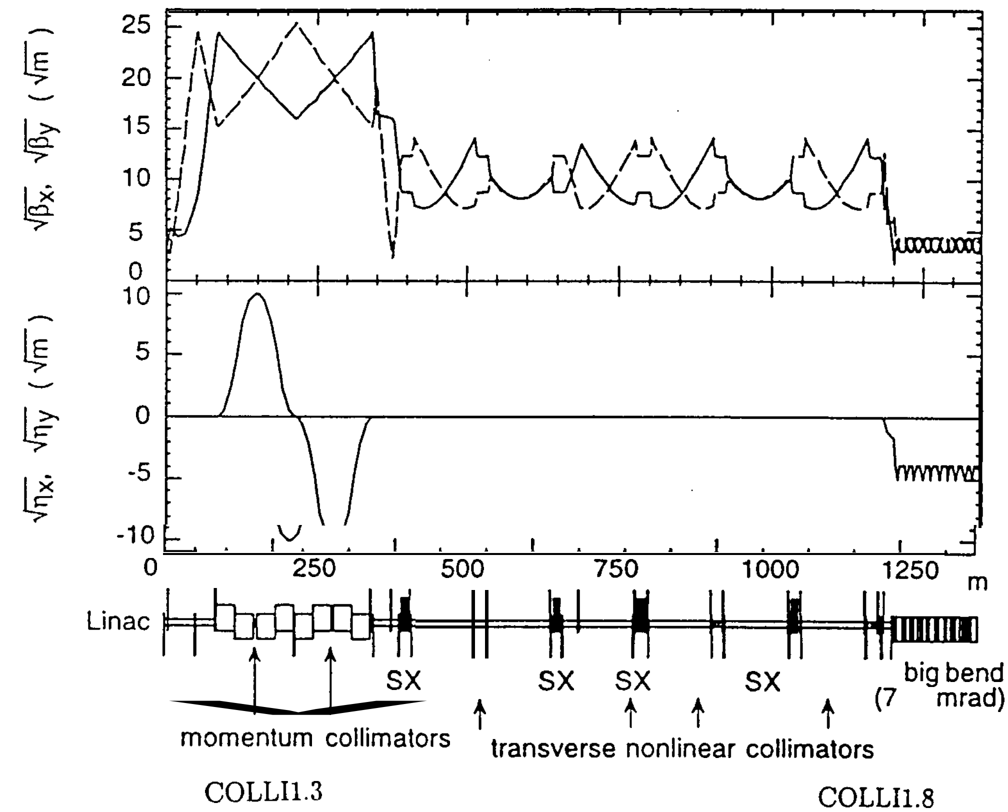


Figure 7: Lattice of the collimator and the big bend. SX denotes the four identical sextupole magnets for the nonlinear transverse collimator

Table 1: Location of bending magnets and collimators

Element	s (m)	Function
Bend1	90	-3.28 mrad
Bend2	1600	7 mrad
COLLI1.8	1840.3	x', y' second colli.
COLLI1.7	1966.7	x', y' first colli.
COLLI1.6	2093.1	x , y second colli.
COLLI1.5	2219.5	x , y first colli.
COLLI1.4	2357.4	Moment um second colli.
COLLI1.3	2483.9	Momentum first colli.
COLLI1.2	2725.4	(In the linac)
COLLI1	2855.6	(In the linac)

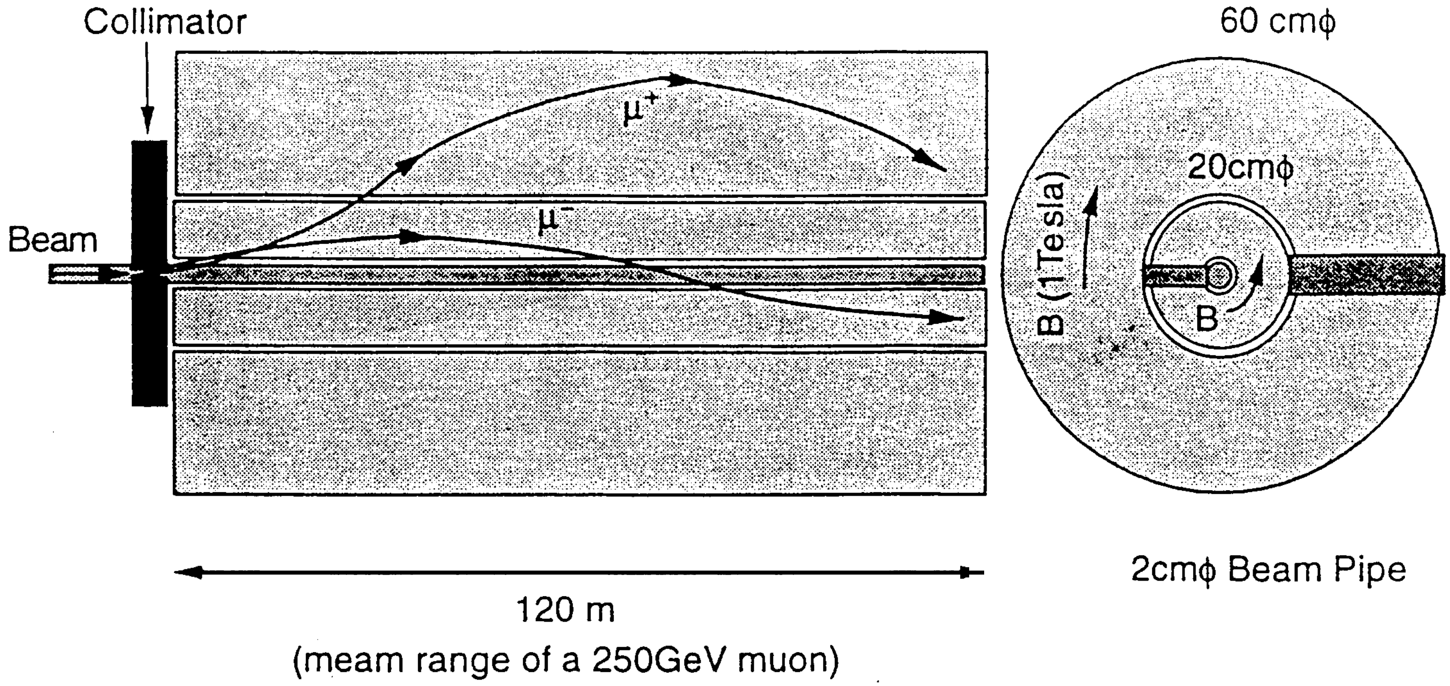
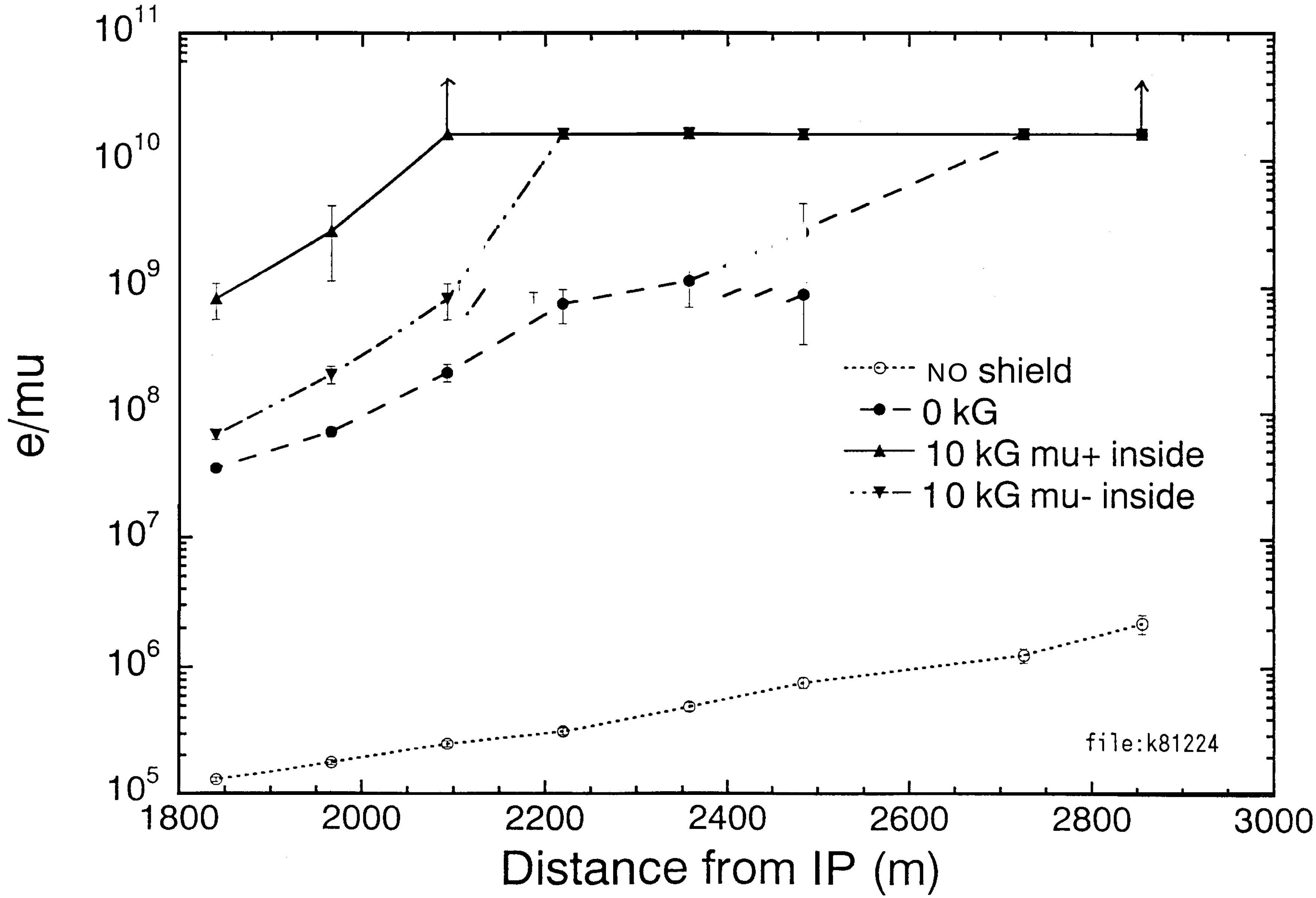


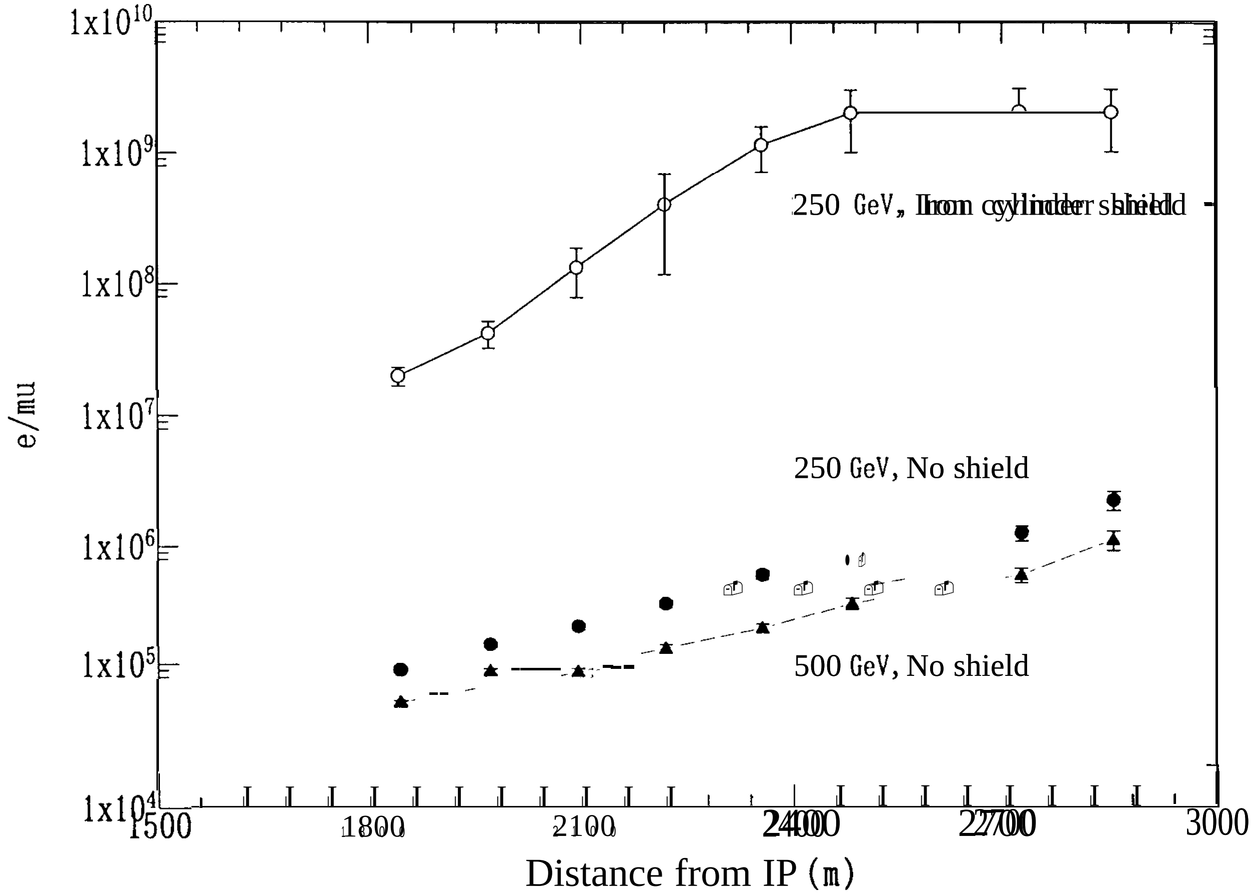
Figure 14.2: *Original idea of muon attenuator. Two iron pipes are magnetized axially in opposite directions for both charged muons which can be trapped, where the 120m length of the iron pipe corresponds to a mean range of 250GeV muons.*

1 Best case: muon attenuator at 1510-2856 m

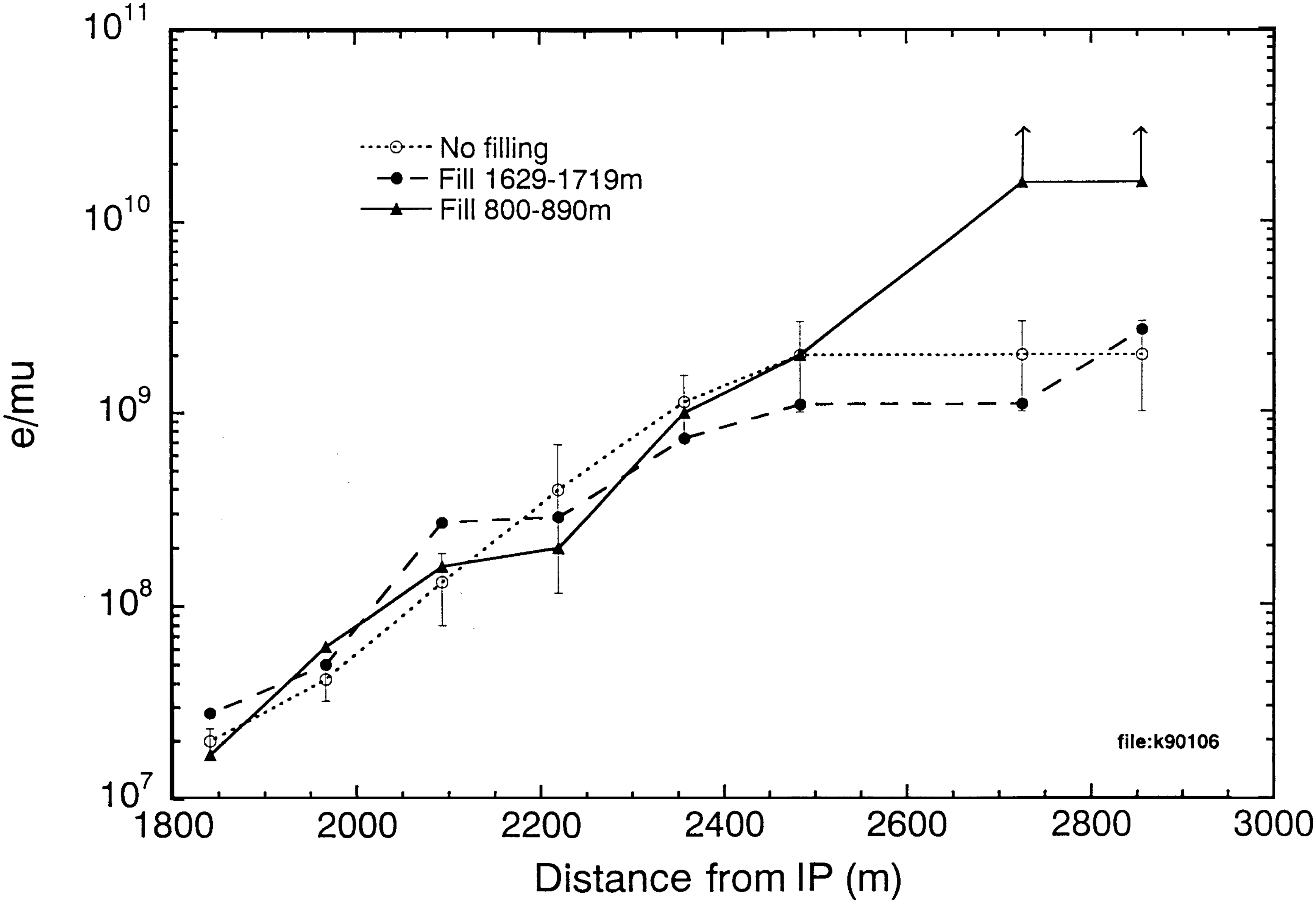
2 Muon attenuator at 1510-2856 m, into the tunnel



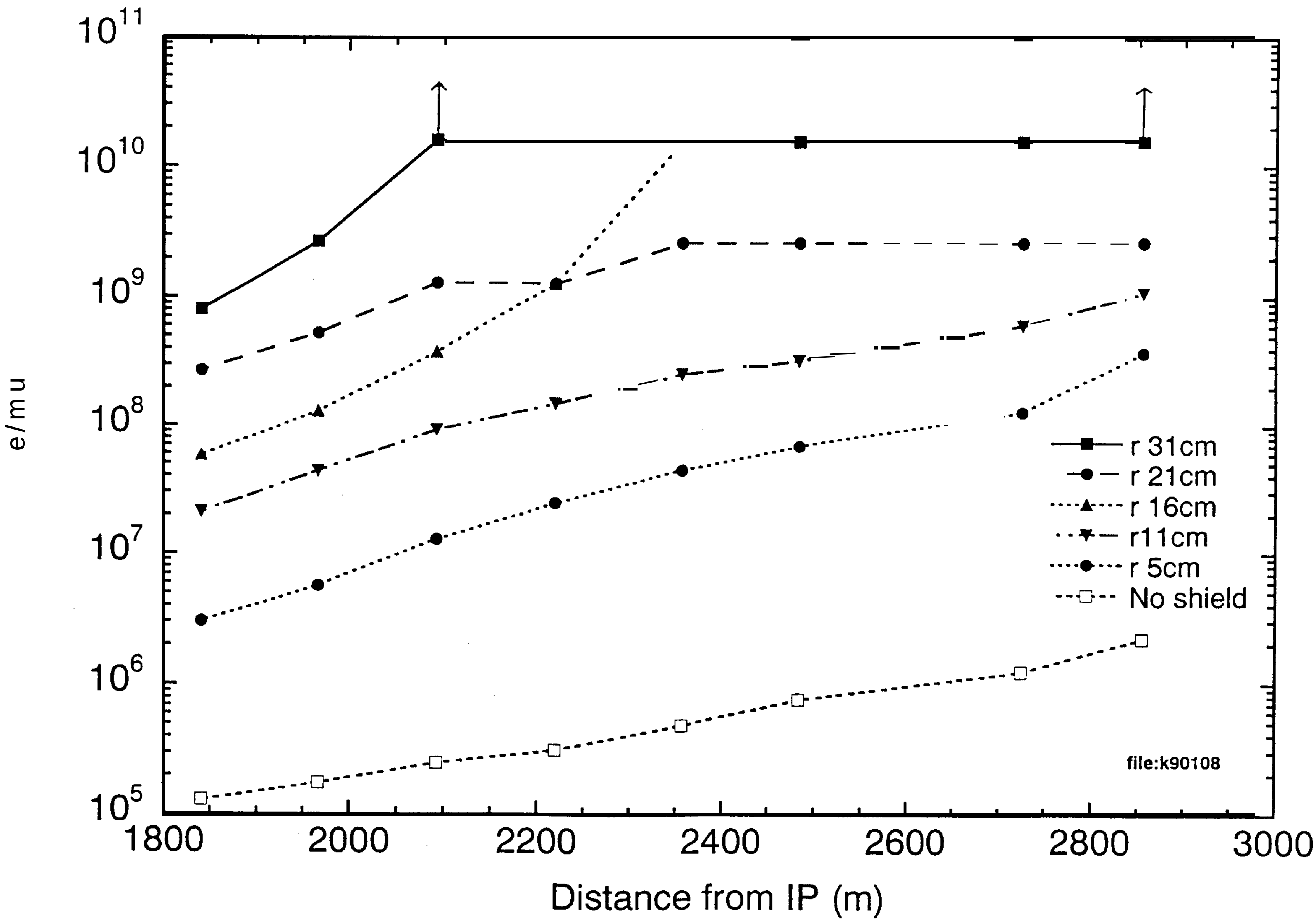
3 Muon attenuator at 1721-2856 m

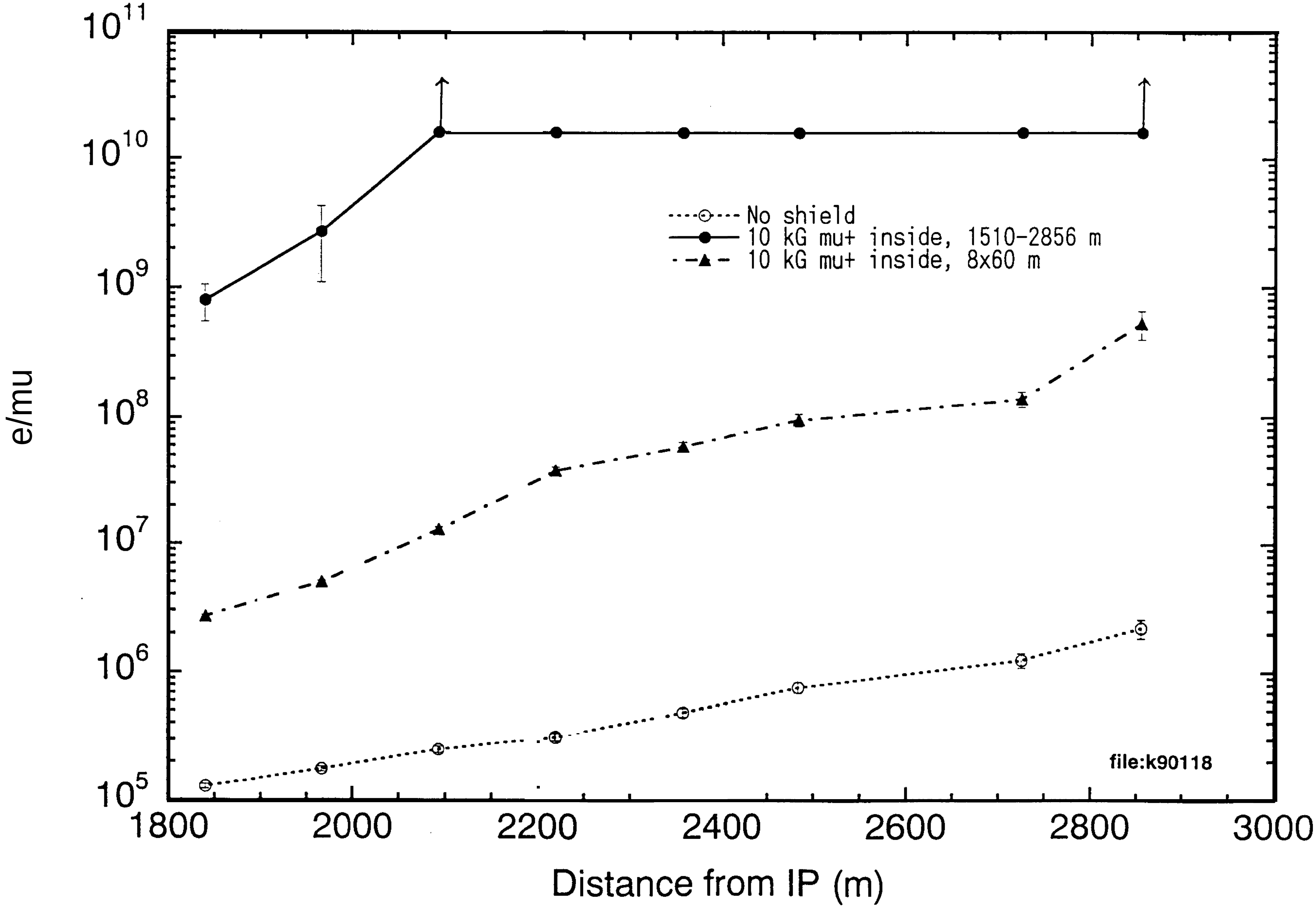


4 Muon attenuator at 1721-2856 m + Concrete filling



5 Case study: muon attenuator at 1510-2856 m, various radius





No shield
10 kG mu+ inside, 1510-2856 m
10 kG mu+ inside, 8x60 m
file:k90118
e/mu
Distance from IP (m)
1800
2000
2200
2400
2600
2800
3000
10^5
10^6
10^7
10^8
10^9
10^10
10^11