Fig. 1.1: ZEUS Central Tracking Device dE/dx vs. βγ

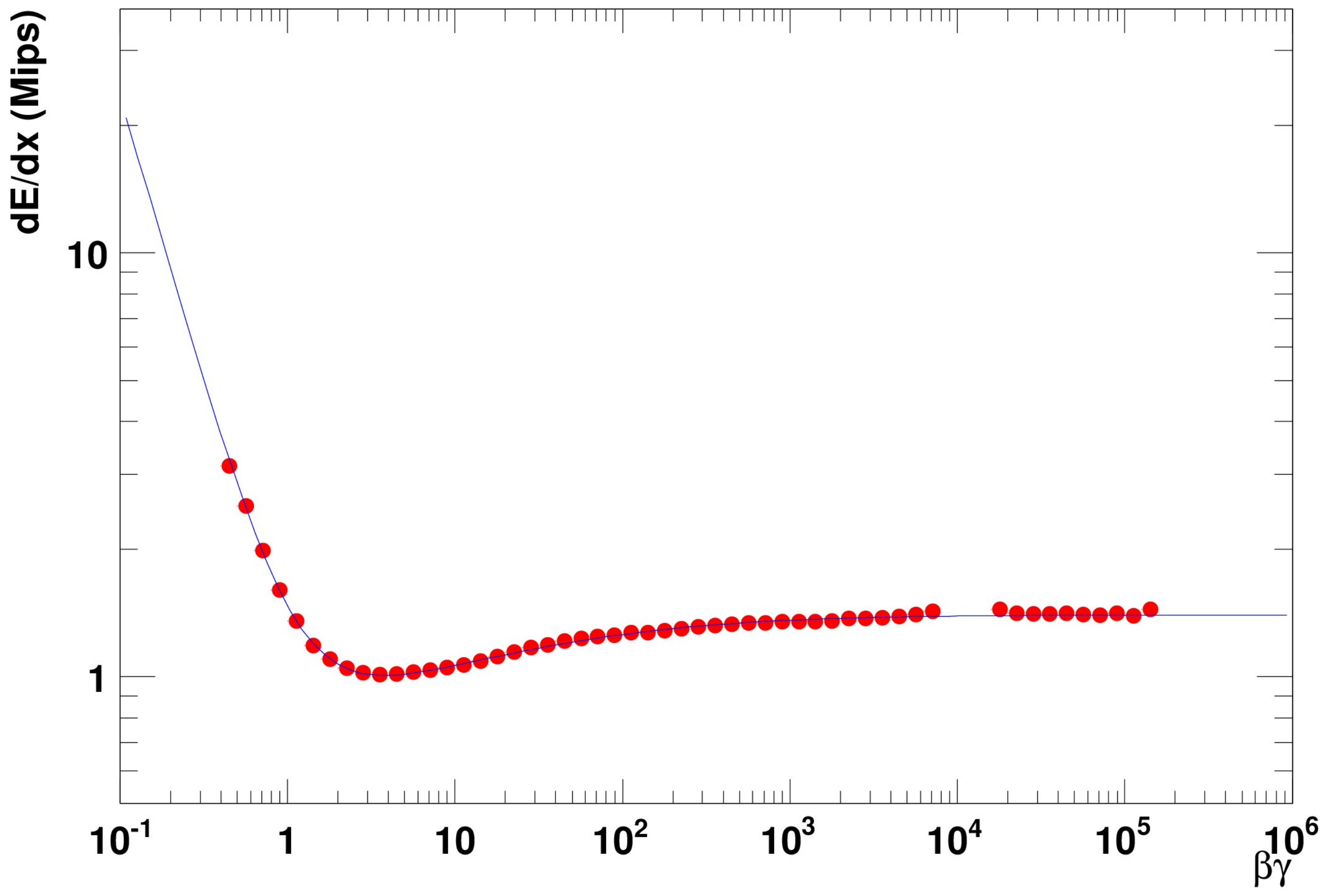

Fig. 1.2: dE/dx_{min} for various absorbers

Absorber	$\frac{dE}{dx}\big\|_{min}\left[\frac{MeV}{g/cm^2}\right]$	$\frac{dE}{dx}\big\|_{min}\left[\frac{MeV}{cm}\right]$
Hydrogen (H_2)	4.10	$0.37 \cdot 10^{-3}$
Helium	1.94	$0.35 \cdot 10^{-3}$
Lithium	1.64	0.87
Beryllium	1.59	2.94
Carbon (Graphite)	1.75	3.96
Nitrogen	1.82	$2.28 \cdot 10^{-3}$
Oxygen	1.80	$2.57 \cdot 10^{-3}$
Air	1.82	$2.35 \cdot 10^{-3}$
Carbon dioxide	1.82	$3.60 \cdot 10^{-3}$
Neon	1.73	$1.56 \cdot 10^{-3}$
Aluminium	1.62	4.37
Silicon	1.66	3.87
Argon	1.52	$2.71 \cdot 10^{-3}$
Titanium	1.48	6.72
Iron	1.45	11.41
Copper	1.40	12.54
Germanium	1.37	7.29
Tin	1.26	9.21
Xenon	1.25	$7.32 \cdot 10^{-3}$
Tungsten	1.15	22.20
Platinum	1.13	24.24
Lead	1.13	12.83
Uranium	1.09	20.66
Water	1.99	1.99
Lucite	1.95	2.30
Shielding concrete	1.70	4.25
Quartz (SiO_2)	1.70	3.74

Fig 1.3: ZEUS Central Tracking Device dE/dx vs. p

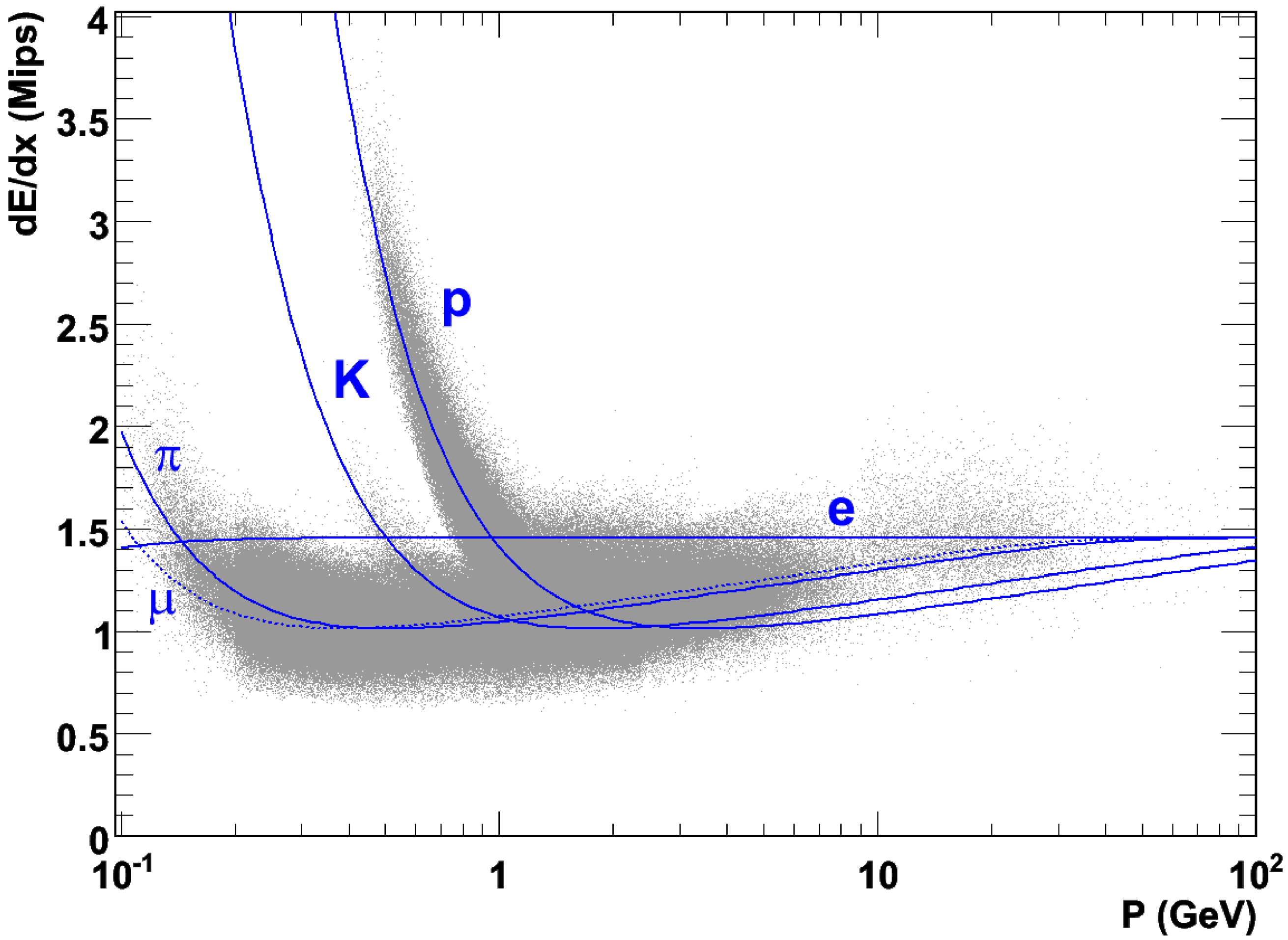

Fig 1.4: Heidelberger Ionenstrahl-Therapiezentrum (HIT)
50-430 MeV Synchrotron
Penetration depth 20-300 mm