FCAL interaction length

See Brabson et al., NIM A332 (1993) 419

Lead Glass F8-00: 45% PbO, 42.8% SiO2, 10.4% K_2O, 1.8% Na_2O
Nuclear collision length = 22.5 cm, Radiation length = 3.1 cm
Density = 3.6 g/cm^3
http://pdg.lbl.gov/2012/AtomicNuclearProperties/index.html

Element	Pion λ_I (g/cm3) PDG	Fraction
Pb	226.2	0.176
O	121.9	0.559
Si	137.7	0.168
K	148.1	0.082
Na	132.2	0.016

$$\frac{1}{\lambda_{LGD}} = \sum \frac{m_i}{\lambda_i}$$

$$\lambda_{LGD} = 138 g/cm^3 = 38 cm$$

As a check, one may scale the nuclear collision length
To Pb glass PDG: λ_C = 95.9 g/cm^3, λ_I = 158 g/cm^3

$$\lambda_{LGD} = 22.5 cm (158/95.9) = 37 cm$$