

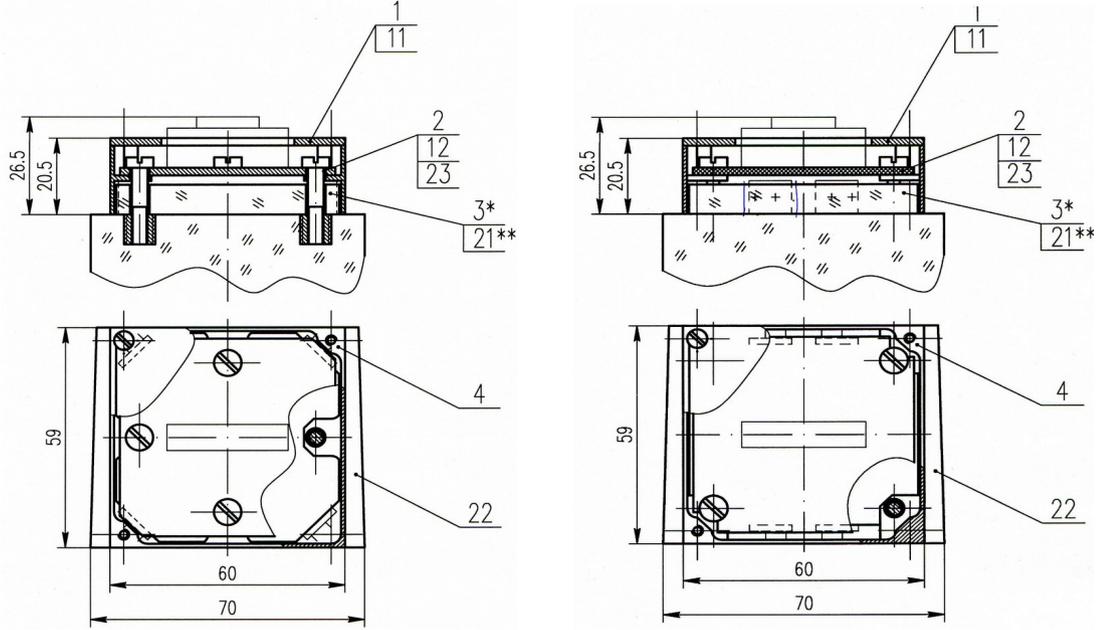
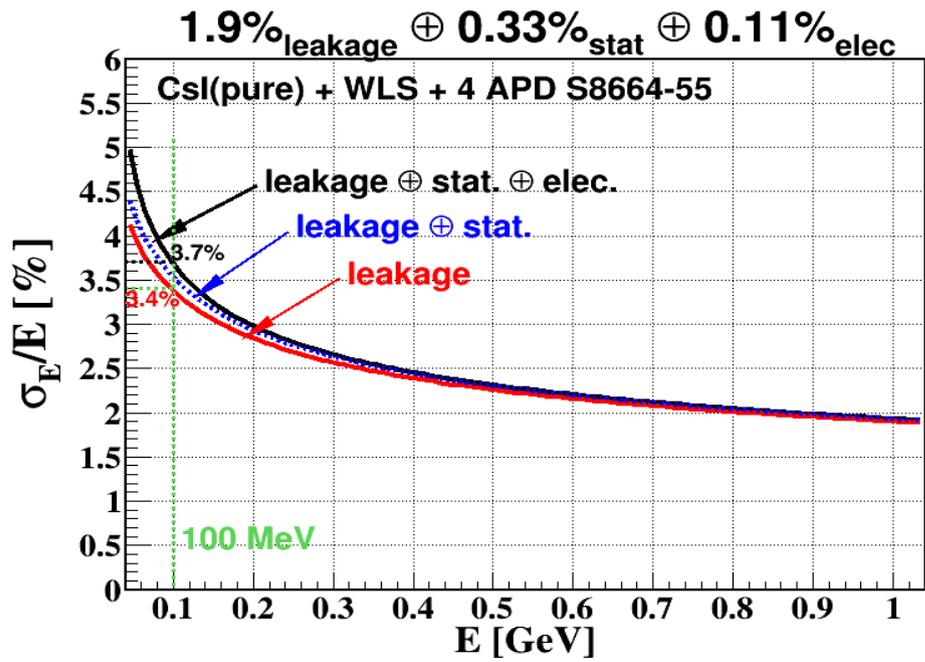
$$\frac{\sigma_E}{E} = \frac{1.9\%}{\sqrt[4]{E [GeV]}} \oplus \frac{Stat}{\sqrt{E [GeV]}} \oplus \frac{Elec}{E [GeV]}$$

fluctuation of e/m
shower leakage
statistics of
photoelectrons
electronic
noise

$$Stat = 100\% \cdot \sqrt{\frac{F}{S [ph.e/MeV] \cdot N_{APD} \cdot 1000}}$$

$$Elec = 100\% \cdot \frac{ENE [MeV] \cdot \sqrt{N_{crys}}}{1000}$$

$F = 1.69 \pm 0.04$
 $S \cdot N_{APD} = (160 \pm 9) \text{ ph.el./MeV}$
 $ENE = (0.33 \pm 0.03) \text{ MeV}$
 $N_{crys} = 10$ – number of crystals
 in the 1 GeV cluster



Plan to construct the calorimeter prototype (16 counters) and perform beam tests