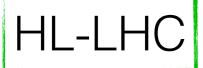


Test beam results with a sampling calorimeter of cerium fluoride scintillating crystals and tungsten absorber plates for calorimetry at the HL-LHC

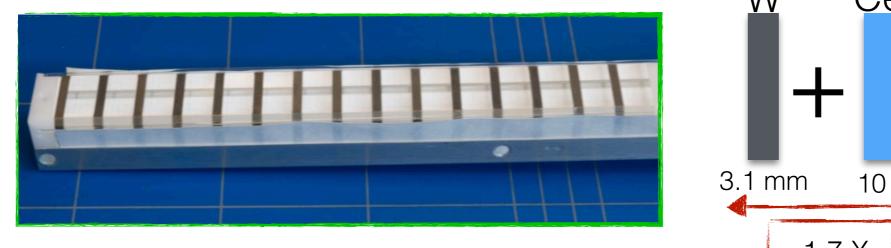


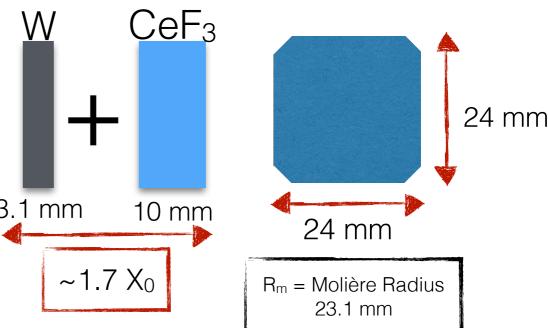


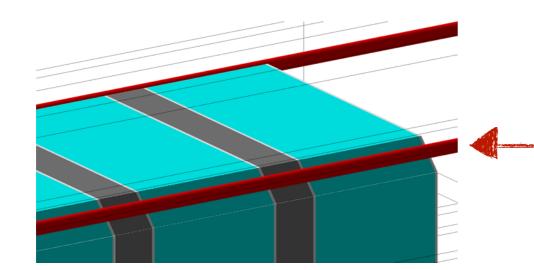


Endcap: high rad. damage (30 Gy/h)









Signal read through WLS scintillating fibres housed in the chamfered edges of the crystal

## Beam Test Results

2 Beam Test

Frascati BTF (E(e-)=491 MeV - 17 X<sub>0</sub>)

► CERN-SPS H4 (E(e-) up to 150 GeV - 25 X<sub>0</sub>)

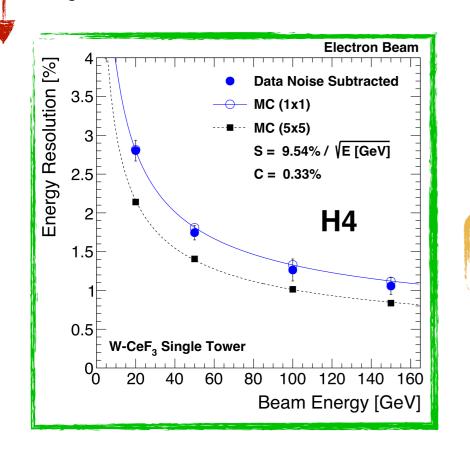
General Beam Line schema

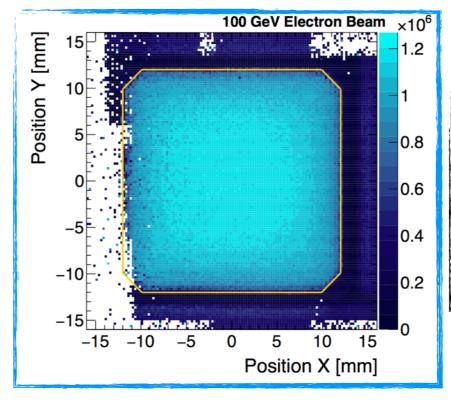
Scintillators (trigger)

**e**-

Hodoscope/Wire Chambers (Positioning)

CeF<sub>3</sub> tower





Response map of the W-CeF<sub>3</sub> channel as a function of the impact point with the channel dimension superimposed

**Energy Resolution** 

$$\frac{\Delta E}{E} = \frac{N}{E} \oplus \frac{S}{\sqrt{E}} \oplus C$$

S= **9.7** %

Stochastic Term

Frascati

S= **9.54** % C= 0.33 %

Stochastic and Constant Term

H4

**Good Resolution: suitable for HL-LHC**