

### Active Elements:

- Hexagonal modules based on Si sensors in CE-E and high-radiation regions of CE-H
- “Cassettes”: multiple modules mounted on cooling plates with electronics and absorbers
- Scintillating tiles with SiPM readout in low-radiation regions of CE-H

### Key Parameters:

Coverage:  $1.5 < |\eta| < 3.0$

~215 tonnes per endcap

Full system maintained at  $-30^{\circ}\text{C}$

~620m<sup>2</sup> Si sensors in ~30000 modules

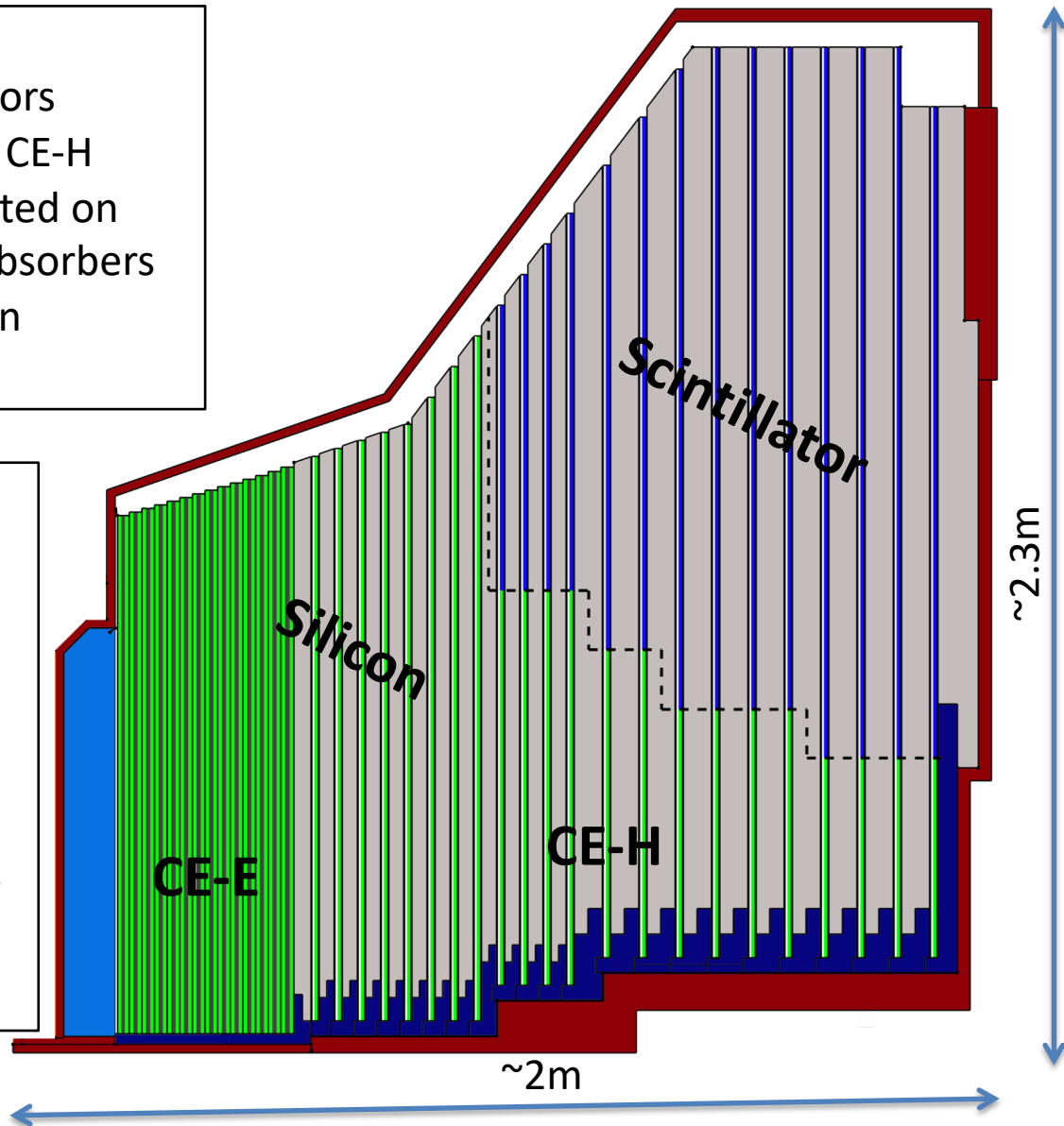
~6M Si channels, 0.5 or 1cm<sup>2</sup> cell size

~400m<sup>2</sup> of scintillators in ~4000 boards

~400k scint. channels, 4-30cm<sup>2</sup> cell size

Power at end of HL-LHC:

~125 kW per endcap



Electromagnetic calorimeter (CE-E): **Si**, Cu & CuW & Pb absorbers, 28 layers,  $25 X_0$  &  $\sim 1.3\lambda$   
Hadronic calorimeter (CE-H): **Si** & **scintillator**, steel absorbers, 22 layers,  $\sim 8.5\lambda$