

# LFHCal TDR planning

**February 7, 2024**

**Friederike Bock for the LFHCal & insert crew**

- **Detector design**

- ▶ Overview
- ▶ Detector requirements
- ▶ Radiation requirements
- ▶ Test beam results

- **Performance**

- ▶ Single particle studies w/ and w/o other detectors in front
- ▶ Clusterization
- ▶ Full event reconstruction
- ▶ Jet performance?

- **Mechanics**

- ▶ Internal module structure (8M, 4M, insert)
- ▶ Stacking plan
- ▶ Seismic & load deformation studies
- ▶ Scintillator performance

- **Read-out electronics**

- ▶ SiPM boards (8M, 4M & insert modules)
- ▶ Transfer boards
- ▶ Summing stage
- ▶ FEB for LFHCal & insert modules

- **Cooling**

- ▶ Heat load simulations
- ▶ Cooling system for insert modules?

- **Calibration system**

- ▶ LED system
- ▶ temperatur monitoring

- **Integration**

"from previous work"  
"ready to write up"  
"partially ready to write up"  
"lots to do"