

OBJECTIVES

1. Simulation study of hadronic showers with time information
2. Simulation study of cooling system required for the T-SDHCAL unit based on the present knowledge of the Liroc ASIC power consumption as well as the other components to be used.
 1. Mechanical structure with the cooling system
 2. Conception and production of fast-time electronics (PETIROC/Liroc+TDC)
3. Conception of a thin and large ASU hosting the readout electronics to be associated to the MRPC in a cassette.
4. A DAQ system allowing the communication and the synchronization of a few T-SDHCAL units.
5. Construction of a few T-SDHCAL units. Brussels, Lyon, Shanghai, GWNU
6. Construction of cooling units for the T-SDHCAL units.
7. Validation of the new T-SDHCAL units in beam tests first in independent way and then with the other SDHCAL units.
 1. Comparison with the simulation.