The LHCb calorimeter comprises the scintillator pad detector (SPD), preshower (PS), electromagnetic Shashlyk type (ECAL) and hadronic Tile (HCAL) calorimeters, arranged in pseudo-projective geometry. All the four detectors follow the general principle of reading the light from scintillator tiles with wave-length shifting fibers, and transporting the light towards photomultipliers (25 ns R/O).

Scintillator pad detector and preshower consist of a 2.5 Xo layer of lead sandwiched between two planes of identical detectors, SPD and PS. Each SPD/PS comprises a total of 2x6016 detector cells/R-O channels.

Electromagnetic calorimeter employs Shashlik technology, has the volume ratio Pb:Sc = 2.4 (mm), and has a 29 Xo (114 Å) depth. ECAL comprises a total of 6016 detector cells/R-O channels

Hadronic calorimeter is a Fe-Sc tile calorimeter, 5.6 Xo depth, comprises 1468 detector cells/R-O channels

The calorimeter cells have been tested and pre-calibrated before the installation.

Pre-calibration done with cosmic particles for SPD/PS and ECAL, and with 137Cs source for HCAL, x-checked using e/h TestBeam. Final calibration achieved with physics data, methods in preparation use ET flow, MIPs, electrons, no iterative and analytical procedures. Goal is to achieve 15% ECAL pre-calibration at the start of LHCb.

The LHCb calorimeter provides high E_T hadron, electron, photon and m^0 candidates for the first level trigger, provides electron identification essential for the flavour tagging, and gives access to studies of B-meson decays with m^0 and prompt photons.

Combined electron identification from Calo (+ Cerenkov detector) information: efficiency ~95%, m^0 identification rate ~3% y reconstruction. 70% Xo before Calo ~40% conversions before Calo reconstruct conversion if: +Magnet with tracker, if: +Magnet as single cluster tagged by SPD hit.

High energy m^0s are often seen as single ECAL clusters.

Dedicated shower shape analysis allows to identify single cluster (merged) m^0s

Prompt photons from radiative B->J/psi gamma transitions: B^+->K^+gamma, B^0->phi gamma, r_i(x) vs y_{veto}

<table>
<thead>
<tr>
<th>Event type</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>2 clusters</td>
<td>E(x)/E(y)</td>
<td>2 clusters</td>
</tr>
<tr>
<td>1 cluster</td>
<td>E(x)/E(y)</td>
<td>1 cluster</td>
</tr>
</tbody>
</table>

The LHCb calorimeter has been installed in the LHCb experiment, commissioning is ongoing.

Pulse shape on 30 GeV e-beam for 4 different layers in depth of HCAL

The LHCb calorimeter has been installed in the LHCb experiment, commissioning is ongoing.