LUMI control plots at L4

Status: 14-Oct–1995

- **10001 - 10006:** coordinate distributions at ET, PD and ET1 calorimeters. Look for unusual spikes and/or holes. To see the details in figure 10005 draw it in a log-y scale (e.g.: `y 10004 10005 logy 2`).
  The x-distribution at 10005 should end at $x_{ET1} \leq 0$ cm.

- **10007, 10009:** energy spectra at two electron calorimeters (ET, ET1). Expected acceptances are roughly in the region 8-24 GeV and 12-27 GeV respectively. The shapes of the distributions depends both on the beam conditions and the trigger mixture. So, do not bother experts in case of small differences with reference plots!

- **10010:** Energy distribution in the Cherenkov Veto counter. Use log-y scale to display it! Watch the high energy edge: the expected end is around **7-10 GeV**. If significantly differs – this indicates the calibration problem or the deteriorated responce.

- **10028, 10029:** total energy sums. In ideal case should be equal to the E(e-beam). Due to the larger leakage in a small ET1 calorimeter, the second sum is typically lower by 1.5-2 GeV. Check the peak positions:
  $26 <$ Peak(10028) < 28 GeV; $23 <$ Peak(10029) < 27 GeV.
  If outside given ranges – inform experts. This usually means problems with online calibration as a consequence of extremely high rates, partial beam losses, or wrong timing used in a Central Trigger.

- **10030:** Lumi trigger bits history. Check, that the clear maximum for each bit is in the right (zero) time slice. The tails around TS=0 should be approximately constant at the level of few percent.
  In case of significant deviations from the reference plot – call expert immediately!