LUMI control plots at L4

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10001 – 10008: Coordinate distributions at ET, PD, ET1,ET2 calorimeters.
Look for unusual spikes and/or holes. To see the details in figure 10005−10008
draw it in a log−y scale (e.g.: y 10004 10005 logy 2).

10009, 100011,10012: Energy spectra at three electron calorimeters (ET, ET1,ET2).
Expected acceptances are roughly in the region 8−24 GeV, 12−27 GeV and 2−10GeV
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!

10013: Energy distribution in the Cherenkov Veto counter. Use log−yscale to display it!
Watch the high energy edge: the expected end is around 7−12 GeV. If significantly
differs – this indicates the calibration problem or the deteriorated responce.

10010: Energy distribution in the Photon detector. Inform expert in case of significant
differences.

10018−10020: Total energy sums. In ideal case should be equal to the E(e−beam). Due
to the larger leakage in a small ET1 ,ET2 calorimeters, the second sum is typically
lower .Check the peak positions:

26 < Peak(10018) < 28 GeV; 23 < Peak(10019,10020) < 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.

10021: Hit map of all Lumi detectors. Check for new holes and spikes. Inform expert
in case of significant differences or if in doubt.

10014 – 10017: Number of hit channels in ET,PD,ET1,ET2. If data plot differs signi−
ficantly from reference one – please inform expert.

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!