Some comments on effective speed

- Previously (09/03/2015, Reconstruction meeting) we had seen plots of the effective speed when a $0 < z < 130$ cut is applied.
- The results from cosmics where "strange" in the sense that the values of the effective speed shouldn't depend on z.
- The plots that follow show the z-dependence of the difference $z_{track} - z_{point}$.
- Run 3221 (cosmics): the region $0 < z < 250$ is slightly biased towards negative values. The mean is not 0. When we applied the $0 < z < 130$ cut we got different values because of this structure.
- Furthermore, when we apply a cut like $0 < z < 130$ in a region where the errors (deviations) are $\pm 50cm$, we are essentially getting back a blob of points, like an ellipse (for each channel). Attempting a linear fit on these points is highly questionable.
- On the other hand, the region $270 < z < 400$ is much more linear (Run 3221)
- A different kind of structure is visible in Run 3138: the region $0 < z < 280$ is linear, whereas the rest of the calorimeter exhibits a more unstable behaviour.
- From now on: concentrate on regions of maximum linearity.
- More statistics may be needed for this, so more Runs will be used.
- Each Run will be checked first (check the behaviour of $z_{track} - z_{point}$ graph) and then it will be combined with the appropriate Runs that have similar z-behaviour.

$z_{track} - z_{point}$ as a function of z_{track}