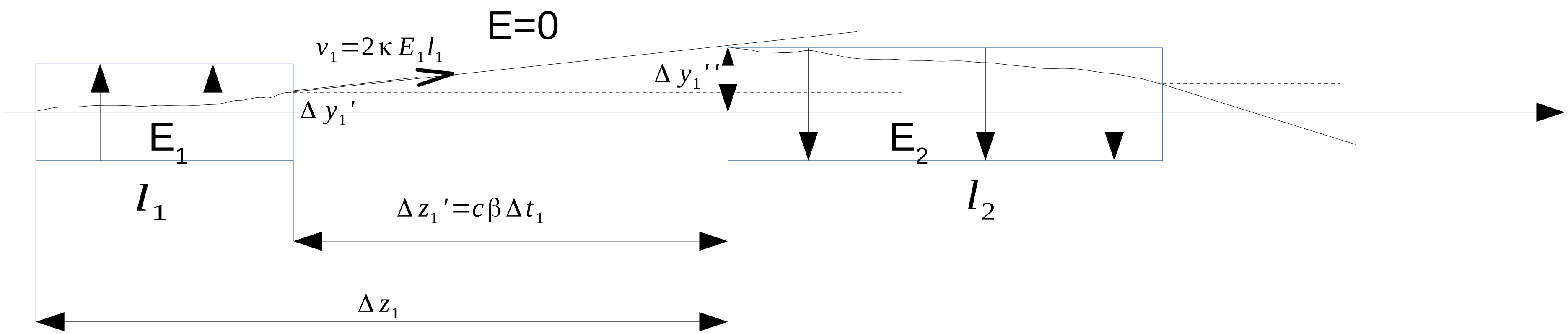

$$\Delta y_1=\Delta y_1'+\Delta y_1''$$

$$\Delta y_1'=\kappa E_1 l_1^2, \kappa=\frac{e}{m}(c\beta)^{-2}>0$$

$$\Delta y_1''=v_1\Delta t_1=2\kappa E_1 l_1 (c\beta)^{-1}\Delta z_1'=\kappa' E_1 l_1 \Delta z_1', \kappa'>0$$

$$\Delta y_1=E_1 l_l(\kappa l_1+\kappa'\Delta z_1')=E_1 l_1\alpha_1, \alpha_1>0$$

$$\Delta Y_\Sigma=\sum_i \Delta y_i=\sum_i E_i l_i \alpha_i=\langle E\rangle_l \sum_i E_i l_i \alpha_i'$$

Proof: $l_i, \Delta z_i', \kappa, \kappa'>0 \rightarrow \alpha_i>0$

Let $\langle E\rangle_l=\frac{1}{l_\Sigma}\sum_i E_i l_i>0, \quad \exists E_i<0;$

$\alpha'_i=h(l_i, \Delta z_i')$, hence by adjusting

$l_i, \Delta z_i'$, it is possible to make $\sum_l E_i l_i \alpha_i'=0,$

even when $\langle E\rangle_l\neq 0.$

Proposition: $\Delta Y_\Sigma=0 \rightarrow \langle E\rangle_l=0$

Equivalent: $\langle E\rangle_l\neq 0 \rightarrow \Delta Y_\Sigma\neq 0$