

The body is subdivided into

$$n = 1 + \text{Floor} \left[\frac{10|\mathbf{K1L}|}{\text{EPS}} \right]$$

slices. $\text{EPS} = 1$ is used when $\text{EPS} = 0$. Then a transversely linear transformation $\exp(: H_{2n} :)$ is applied in each slice with

$$H_{2n} = \frac{1}{n} \left\{ \left(-p + \frac{p_x^2 + p_y^2}{2p} + \frac{E}{v_0} \right) \mathbf{L} + \frac{\mathbf{K1}}{2} (x^2 - y^2) \right\} .$$

Between slices the correction $\exp(: \Delta H :)$ for the kinematical term

$$\Delta H = \frac{1}{n} \left(p - \sqrt{p^2 - p_x^2 - p_y^2} - \frac{p_x^2 + p_y^2}{2p} \right) \mathbf{L}$$

is applied. In a solenoid, the forms of H_{2n} and ΔH are modified.