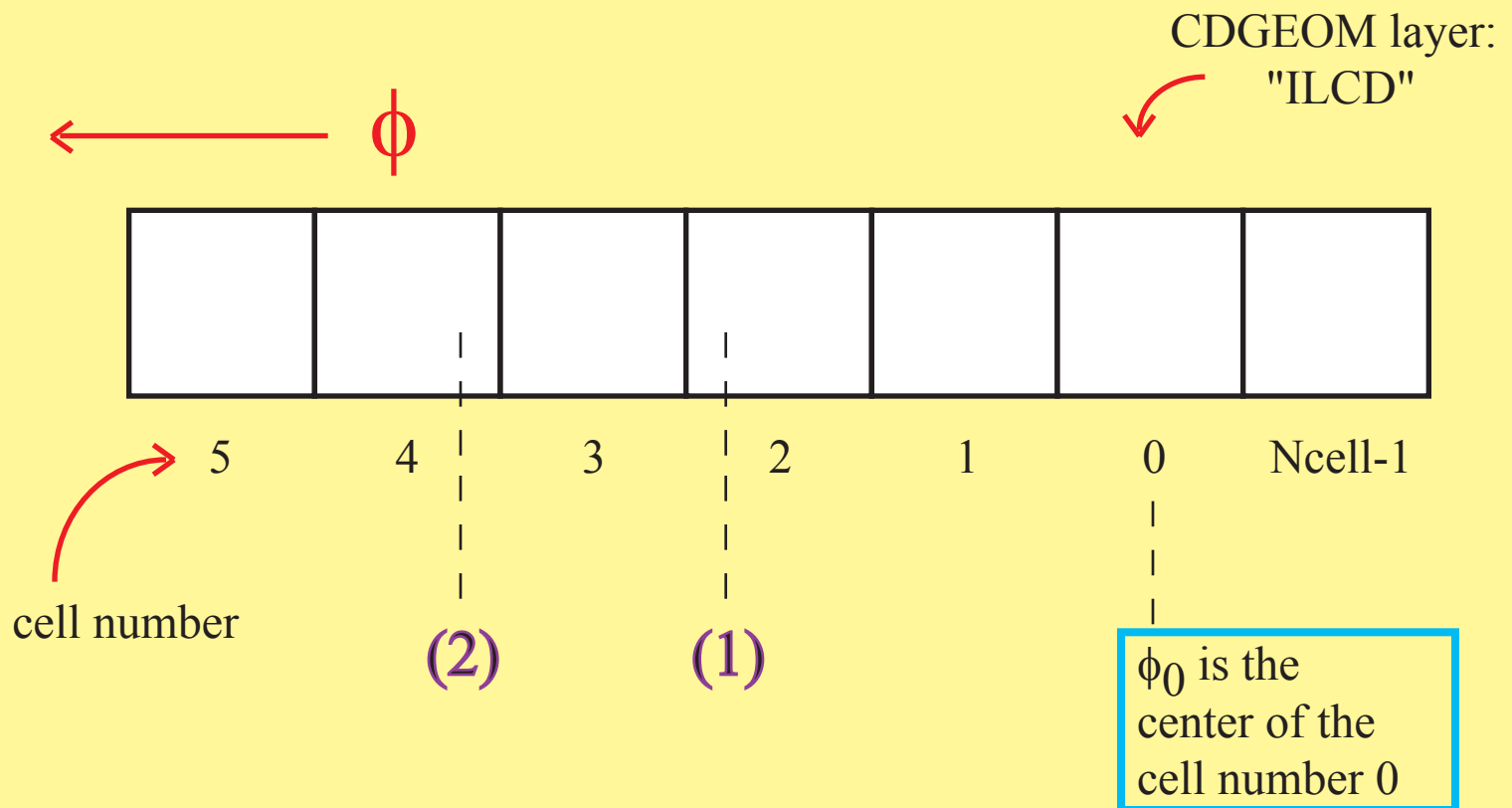


# Figure 4 tpc\_ionization\_centers

Locate the crossings within the cells.



In the example of a track crossing a cylinder at the location (1), **track crossing location** is 2.3 (cell widths) relative to the  $\phi_0$  of the layer. The **cell number** for the crossing is found by rounding to the nearest integer, ie cell number 2 in this example.

The location of the crossing relative to the "low- $\phi$ " edge of the cell is calculated from the residual:

$$\{\text{"track crossing location"} - \text{"cell number"} + .5\} = 0.8 \text{ (cells)} .$$

In example (2), the **track crossing location** is 3.7 (cell widths), the **cell number** for the crossing is 4, and the location of the crossing relative to the "low- $\phi$ " edge of the cell is 0.3 (cells).