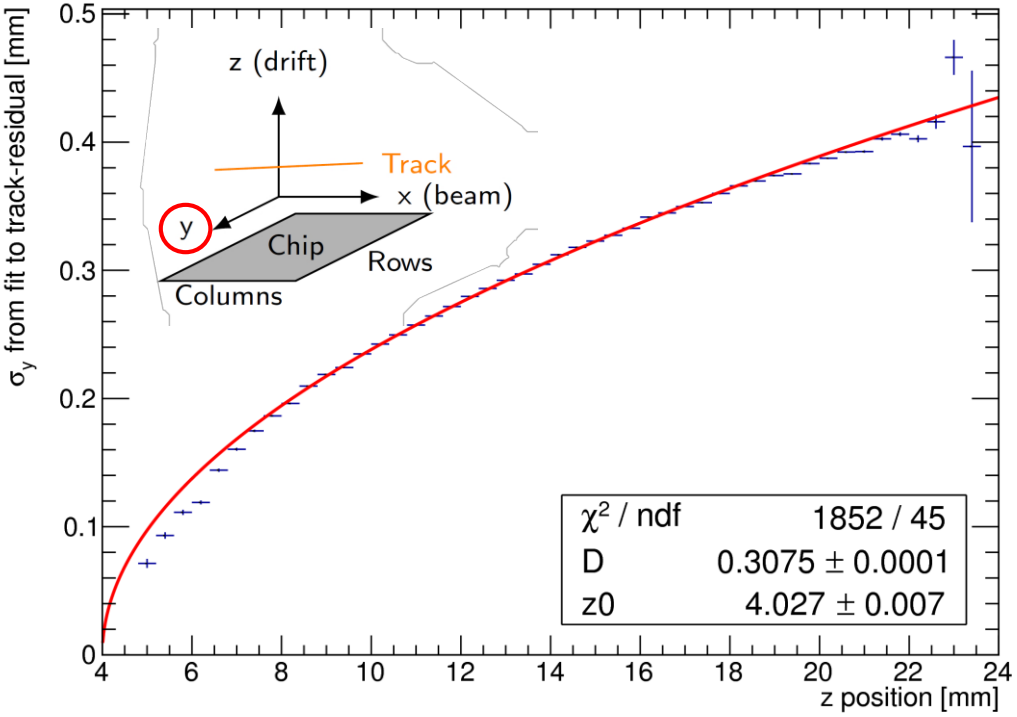
Single hit resolution in pixel plane



Measure diffusion and grid position z_0 by fitting

$\sigma_y = \sqrt{\sigma_{y0}^2 + D_T^2(z - z_0)}$, where $\sigma_{y0} = \frac{55}{\sqrt{12}}$ µm

$D_T = 308\ \mu\text{m}/\sqrt{\text{cm}}$ ($310\ \mu\text{m}/\sqrt{\text{cm}}$ calculated)

Note that at $B = 4$ T, $D_T = 25\ \mu\text{m}/\sqrt{\text{cm}}$

www-hep.phys.saga-u.ac.jp/ILC-TPC/gas/index.html

Single Hit resolution depends on:

- σ_{y0} = pixel size $/\sqrt{12}$
- Diffusion D_T from fit

A hit resolution of ~240 µm is ~24 µm for a 100-hit track (~ 1 cm track length)