

Representing "Cherenkov" Tracks

- Cherenkov relation: $\cos\theta_c = \frac{1}{n\beta}$

- Can be expressed as: $\theta_c^2 = \theta_0^2 - \frac{m^2}{p^2}$

- θ_0 is the " $\beta=1$ " radius, which depends on refractive index

- $N_{\text{photons}} \propto \theta_c^2$

- Plot tracks accordingly:

- different particles in bands
- slopes ~ *mass-squared*
- vertical scale proportional to N_{photons} —the critical parameter in ring-finding

