Studies Completed

- Understanding and demonstration of formulas
- Cherenkov angles for each particle, gas and pressure

\[ \theta = \sqrt{2(n_{21} - 1)p - \left(\frac{m}{E}\right)^2} \]

\[ N_{ph} = 2\pi \alpha s^2 \theta \left(\frac{1}{\lambda_1} - \frac{1}{\lambda_2}\right) L \]
**Studies On-going**

- Calculation of #photons created in each XCET for previous cases studied using maximum angle and photomultiplier wavelength

\[ N_{ph} = 2\pi a \sin^2 \theta \left( \frac{1}{\lambda_1} - \frac{1}{\lambda_2} \right) L \]

- Calculation of “best quality” #photons (only one reflection: mirror → photomultiplier)

**Goal**

- Optimization of mirror and parabolic concentrator