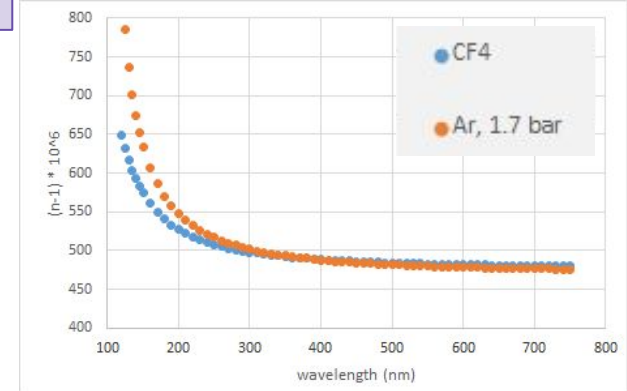
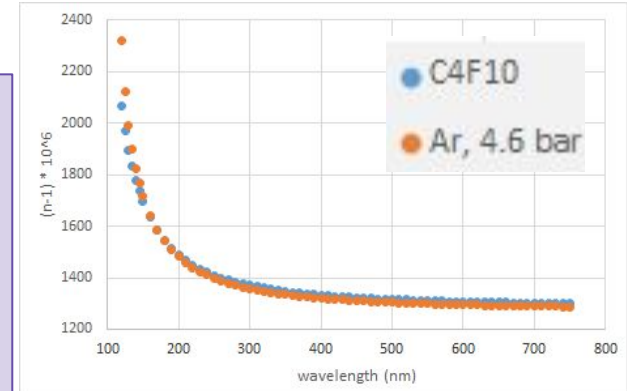


Replacing C-F gases by **pressurised Argon**

- **fluorocarbons are used in RICHes**
 - limited chromaticity
 - high Cherenkov photon yield
 - both these parameters depend on the refractive index and its evolution with wavelength (λ)
- **fluorocarbons are not eco-friendly**
 - they attack the ozone O_3
 - have high Global Warming Potential
 - 100 y GPW values
 - C_4F_{10} : 4800
 - CF_4 : 6500
 - use is more and more banned
- **issues**
 - procurement
 - cost
 - usage limitation

pressurised Argon

- can reproduce fluorocarbon **refractive index** very accurately, in particular in the visible range



study and **engineer the pressure vessel** with a scaled prototype put pressurised Argon and its vessel in RICH **simulations**