

# Refractive index of a metal vapor

For a metal vapor near atomic resonance

$$N = 1 + X_a/2 = 1 + (n_a r_e / 2\pi) f / (1/\lambda_r^2 - 1/\lambda^2)$$

For Lithium

$$\lambda_r = .670 \text{ um}$$

$$f = .744$$

