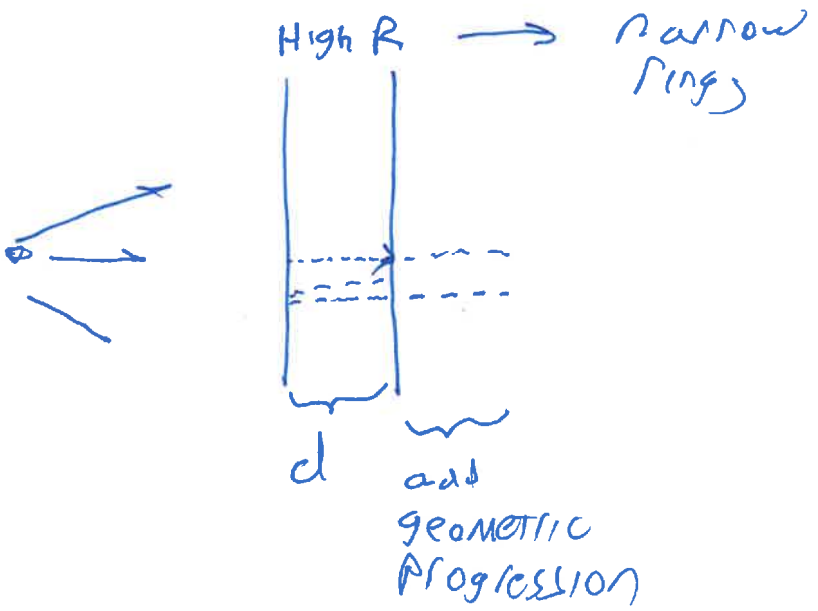

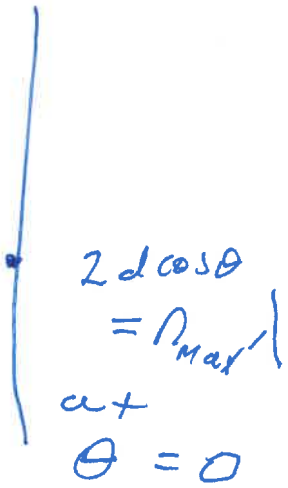

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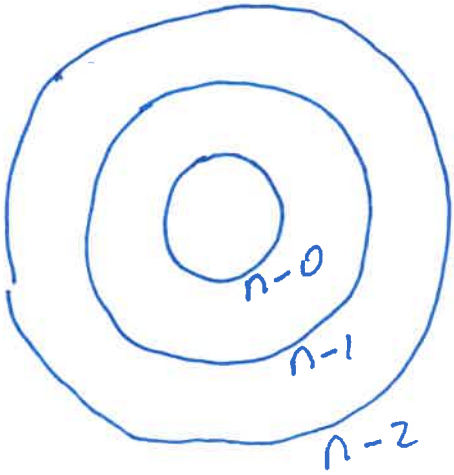
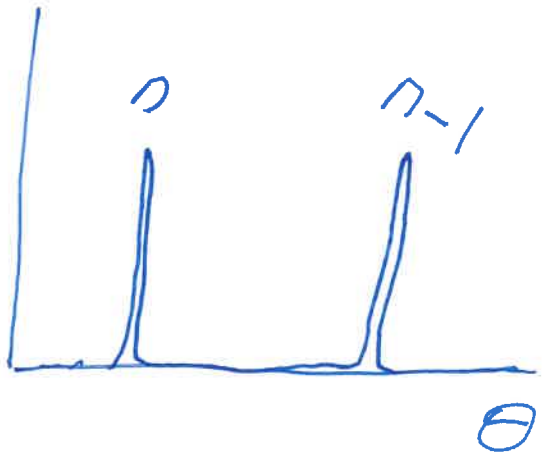
n_{max} at center May not be int.



Intensity Profile

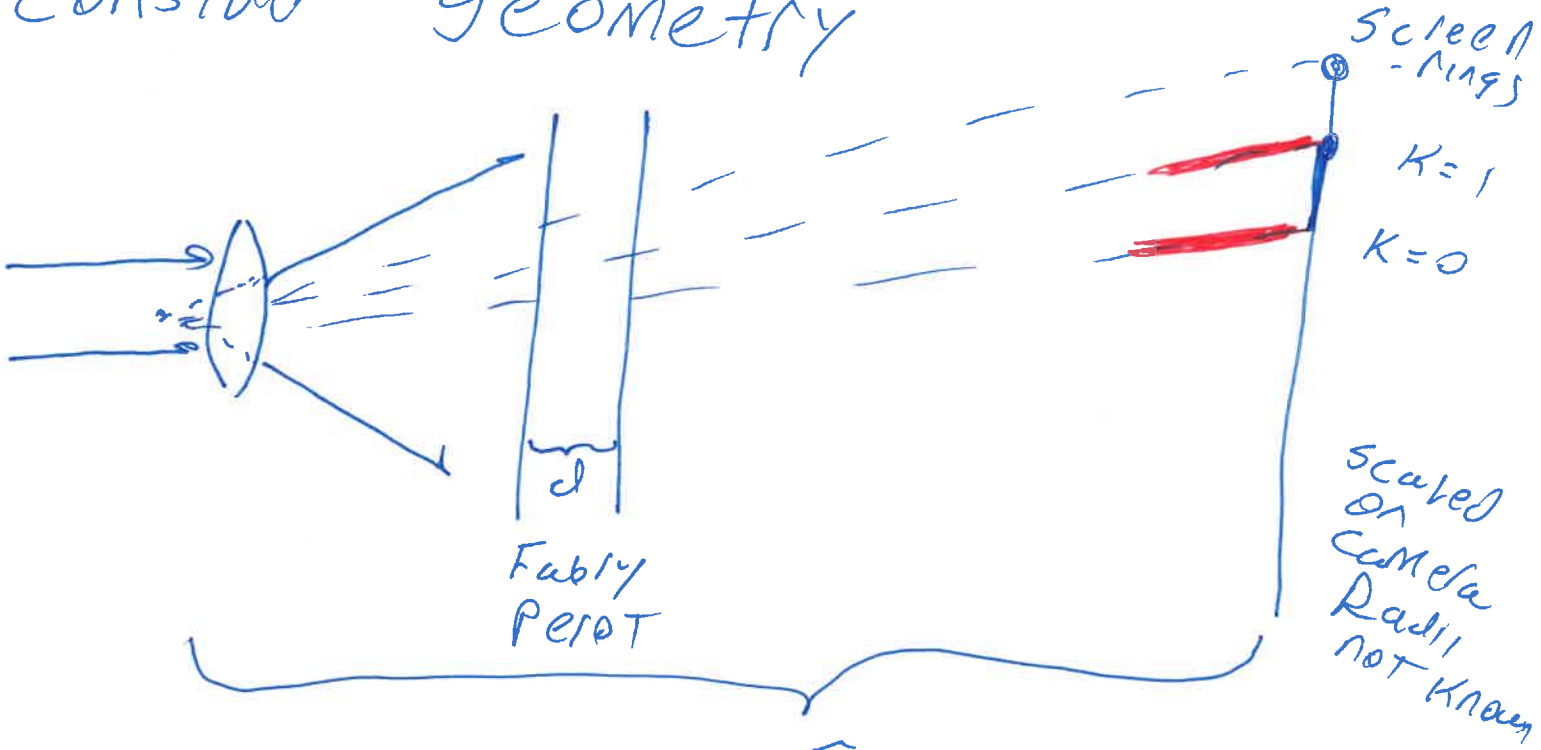


Narrow fringes depend on Refl & wavelength.

$|L, S, J, M_j\rangle \longrightarrow$ when B applied the M_j degeneracy is split.

For a given ring "n-k" we see emission at λ, λ_+, λ_-.

Consider geometry



f - scaled not known

We do know Path diff = λ one ring to next, also θ = small, d

$\longrightarrow$ can get f

$\longrightarrow$ can get $\Delta\lambda = \lambda_{K_+} - \lambda_{K_-}$

The Bohr magneton is the mag dip mom of orbital ang mom of electron in Lowest Bohr orbit:

$$\mu_B = \left| \frac{e\hbar}{2m} \right| = 9.274 \times 10^{-24} \frac{J}{T}$$

This is almost the same as

$$\mu_{\substack{spin \\ electron}} \approx -g_{spin} \mu_B m_s$$

$(A \cdot m^2)$

$$g_{spin} \sim 2$$

Endgame: Ultimately my eq 13 & Pasco are the same:

$$\mu_B = \frac{hc}{2\lambda B f^2} \left(R_{K_+}^2 - R_{K_-}^2 \right)$$