Cap. 7 aberration (7.4.3 Seidel

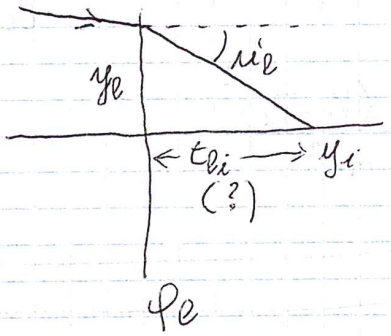
Cap. 22 eyepiece design

$$\begin{cases} n'u' = nu - y\varphi \\ y_i = y_e^* + u_i' t_{ei} \end{cases} \qquad \varphi = (n'-n)C$$

$y_i = 0$

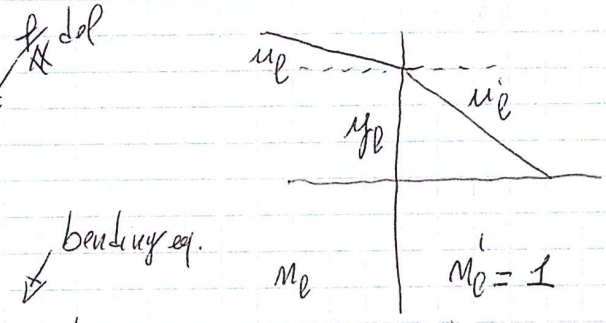
$$0 = y_i = y_e^* + u_i' \cdot t_{ei}$$

$$t_{ei} = -y_e / u_i'$$



M SOLVE
② Ch 8
Thickness
Marginal Ray height

F SOLVE
radius
f/# working



$$\begin{cases} u_e' = -\dfrac{1}{2\,f/\#} \\ y_e \cdot \varphi_e = n_e u_e - u_e' \cdot 1 \end{cases}$$

bending eq.

$$\varphi_e = \frac{n_e \cdot u_e - u_e'}{y_e} = \frac{n_e \cdot u_e + \frac{1}{2\,f/\#}}{y_e}$$

Ma

$$\varphi_e = (1 - n_e) C_e \Rightarrow C_e = \frac{\varphi_e}{1 - n_e} \Rightarrow$$

$$\Rightarrow C_e = \frac{n_e \cdot u_e + \frac{1}{2\,f/\#}}{y_e \cdot} \cdot \frac{1}{1 - n_e} \Rightarrow$$

$$\Rightarrow R_e = \frac{y_e \cdot (1 - n_e)}{n_e \cdot u_e + \frac{1}{2\,f/\#}}$$

MERIT FUNCTION

$$MF^2 = \frac{\sum_i \omega_i \cdot (V_i - T_i)^2}{\sum_i \omega_i}$$

V_i = value measured
T_i = target
ω_i = peso

% Value $\cdot \quad \frac{\omega_i (V_i - T_i)^2}{MF^2}$

$$RMS = \sqrt{\frac{\sum_i (x_i - x_c)^2 + (y_i - y_c)^2}{n}}$$

RMS spot