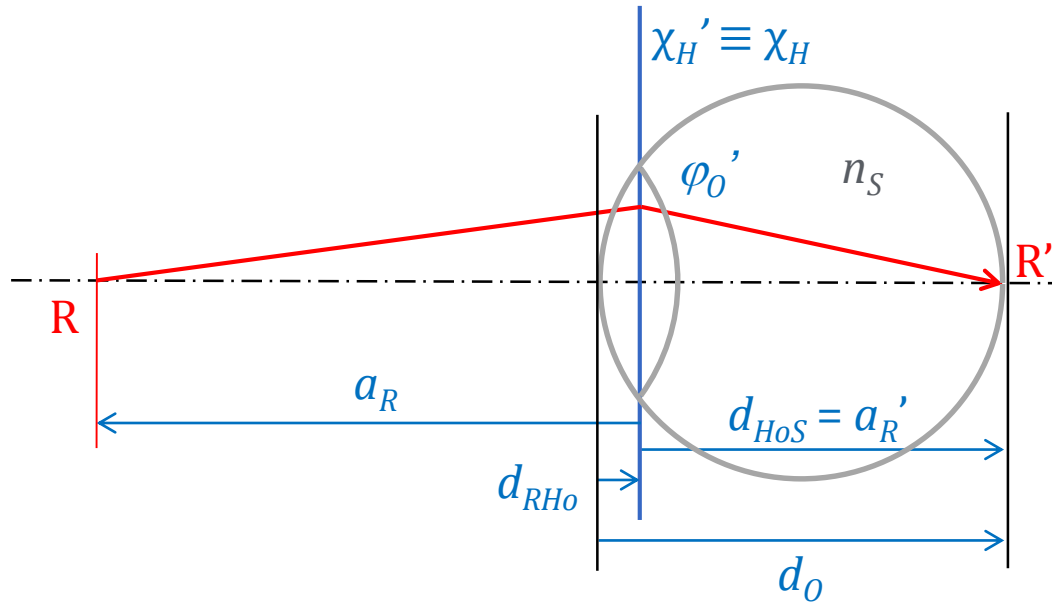


# povaha axiální refrakce a velikost obrazů

# dvě formy ametropie



$$\varphi_0'^E = 58,64 \text{ D}$$

$$d_o^E = 24,385 \text{ mm}$$

$$d_{RHO} = 1,602 \text{ mm}$$

$$a_R^E \rightarrow \infty$$

$$n_S = 1,336$$

celková ametropie:  $A_R = \frac{1}{a_R} = A_{RO} + A_{RS}$

systemová ametropie:

$$A_{RS} = \varphi_0'^E - \varphi_0'$$

osová ametropie:

$$A_{RO} = \frac{n_S}{d_{HoS}} - \varphi_0'^E$$

# emetropická křivka

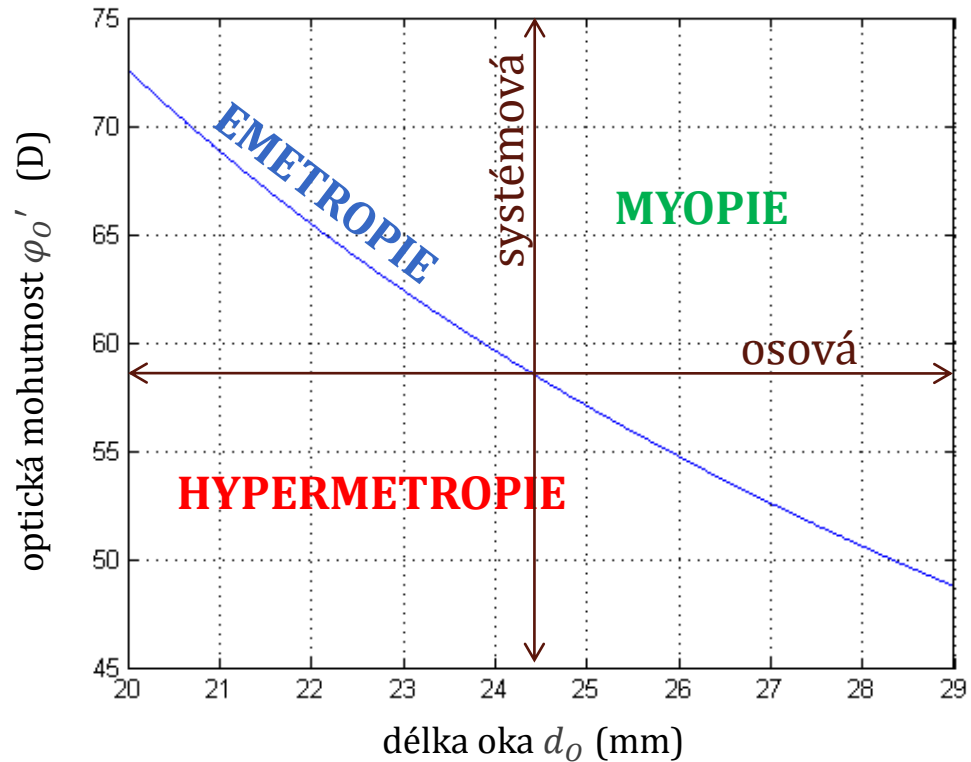
celková ametropie:  $A_R = A_{RO} + A_{RS} = \frac{n_S}{d_{HS}} - \varphi_O'$

emetropie:  $A_R = 0$

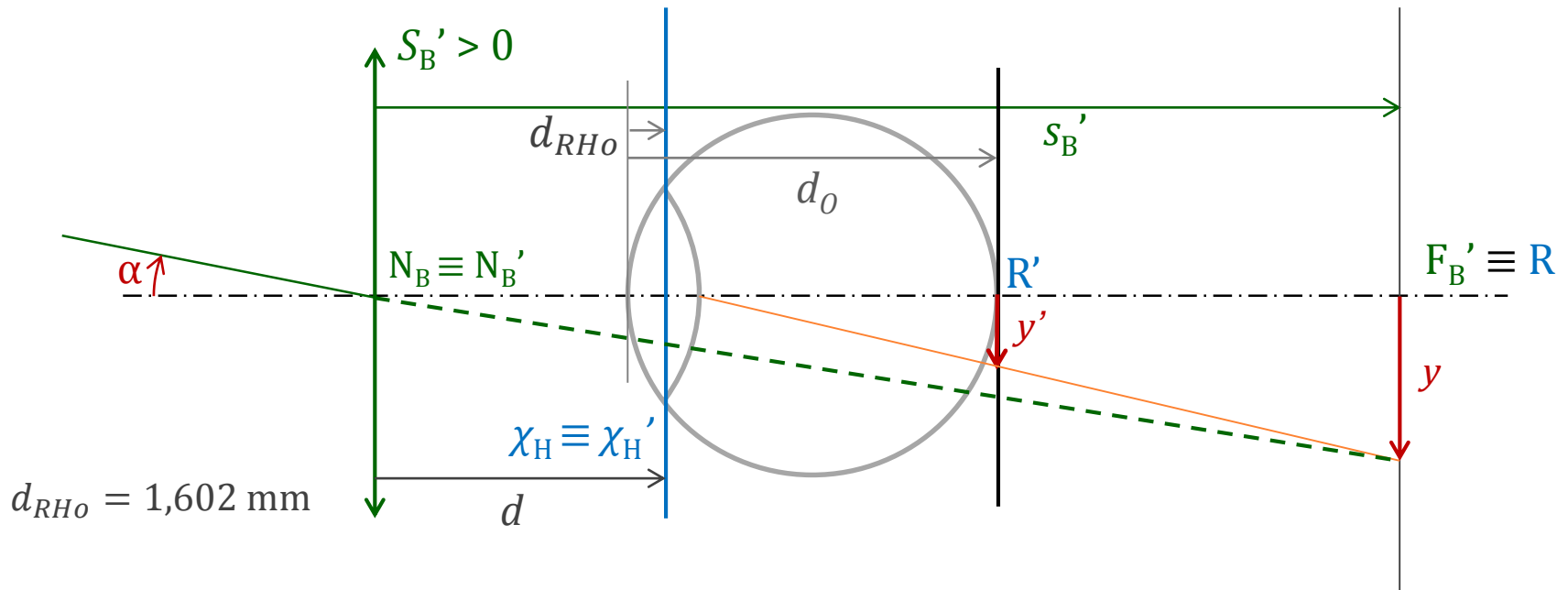
$\Rightarrow$

$$\varphi_O' = \frac{n_S}{d_{HoS}} = \frac{n_S}{d_O - d_{RH_O}}$$

$$d_{RH_O} = 1,602 \text{ mm}$$



# velikost obrazu na sítnici



vzdálenost obrazové hlavní roviny  
od rohovky

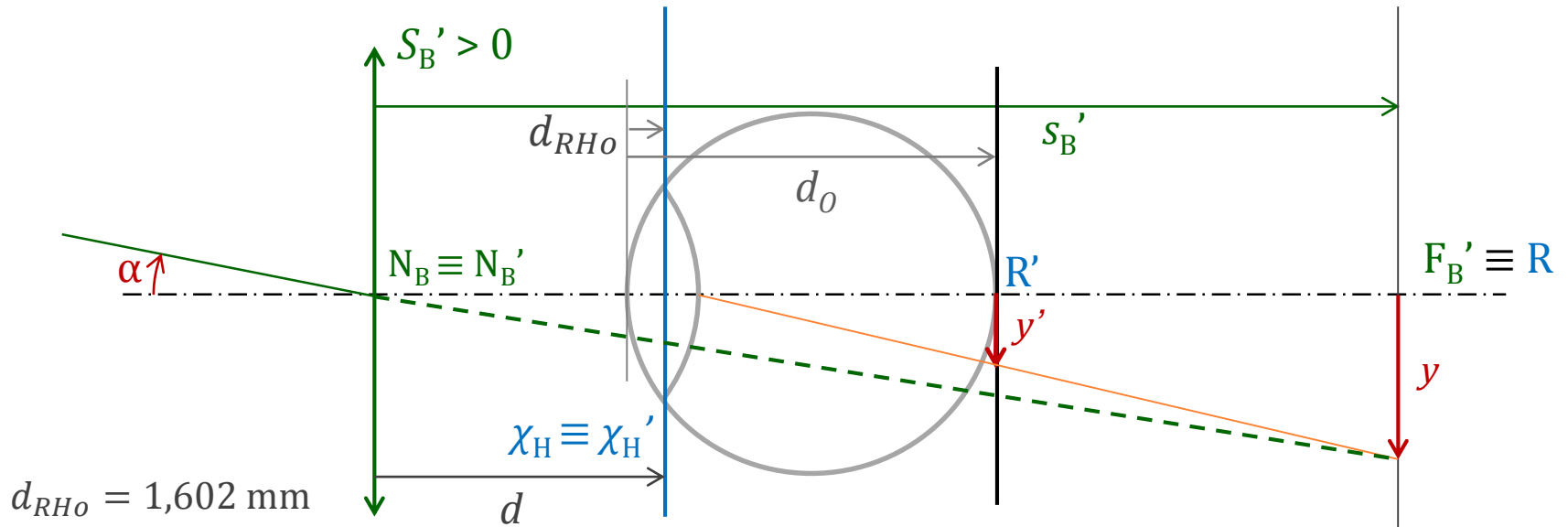
délka oka

vzdálenost brýlové  
čochy od oka

$$y' = \frac{d_o - d_{RHo}}{n_S} (1 + dA_R) \operatorname{tg} \alpha$$

$n$  sklívce

# velikost obrazu na sítnici

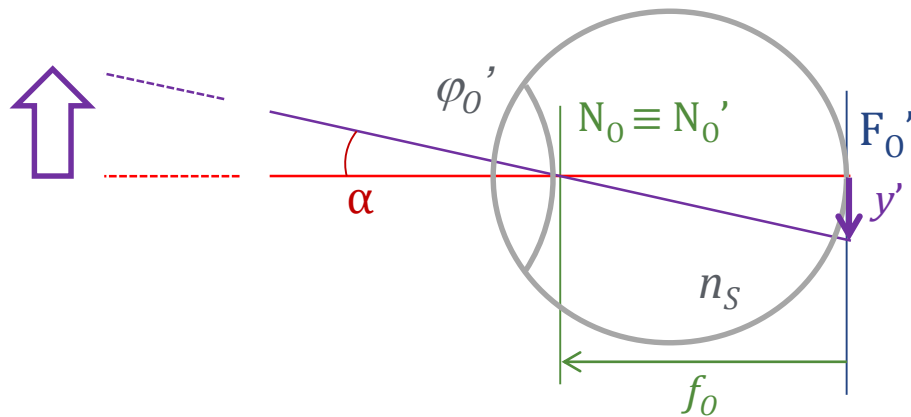


$$\beta_{LP} = \frac{y'_L}{y'_P} = \left( \frac{d_{OL} - d_{RHO}}{d_{OP} - d_{RHO}} \right) \left( \frac{1 + d_L A_{RL}}{1 + d_P A_{RP}} \right)$$

$$\beta_{LP} = \frac{y'_L}{y'_P} = \left( \frac{A_{ROP} + \varphi_O'^E}{A_{ROL} + \varphi_O'^E} \right) \left( \frac{1 + d_L A_{RL}}{1 + d_P A_{RP}} \right)$$

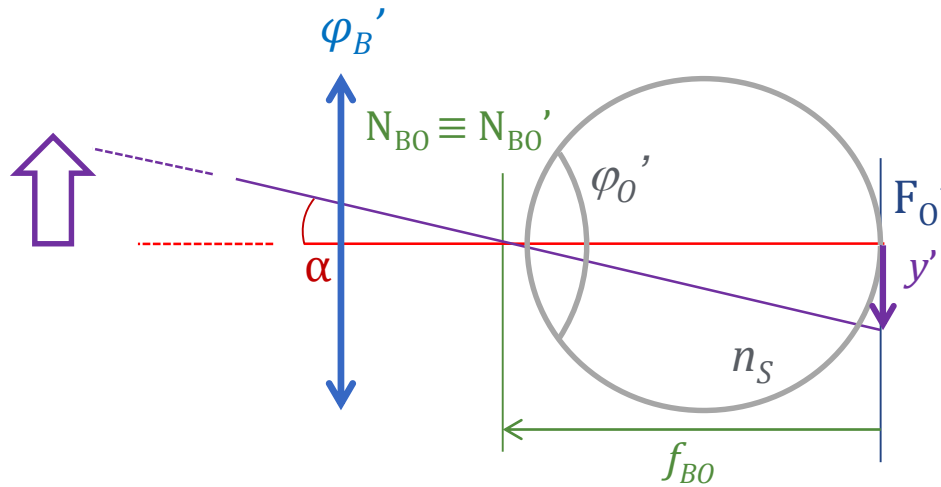
$$\beta_{LP} = \frac{y'_L}{y'_P} = \left( \frac{d_{OL} - d_{RHO}}{d_{OP} - d_{RHO}} \right) \left( \frac{1 - d_P S'_{BP}}{1 - d_L S'_{BL}} \right)$$

# velikost obrazu na sítnici II



$$y' = -f_0 \operatorname{tg} \alpha$$

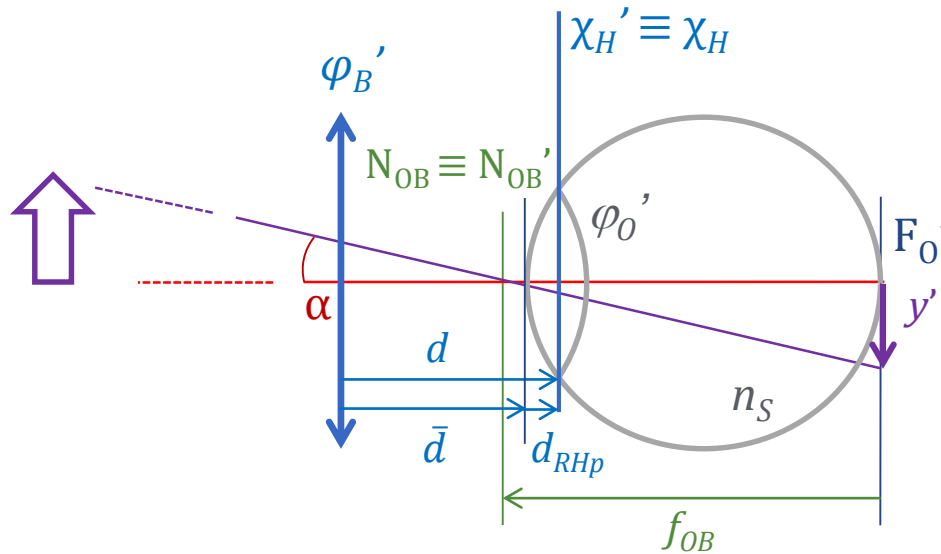
$$f_0 = -\frac{1}{\varphi_{0}'}$$



$$y' = -f_{BO} \operatorname{tg} \alpha$$

$$f_{BO} = -\frac{1}{\varphi_{BO}'}$$

# velikost obrazů na sítnici II



$$y' = -f_{BO} \operatorname{tg} \alpha$$

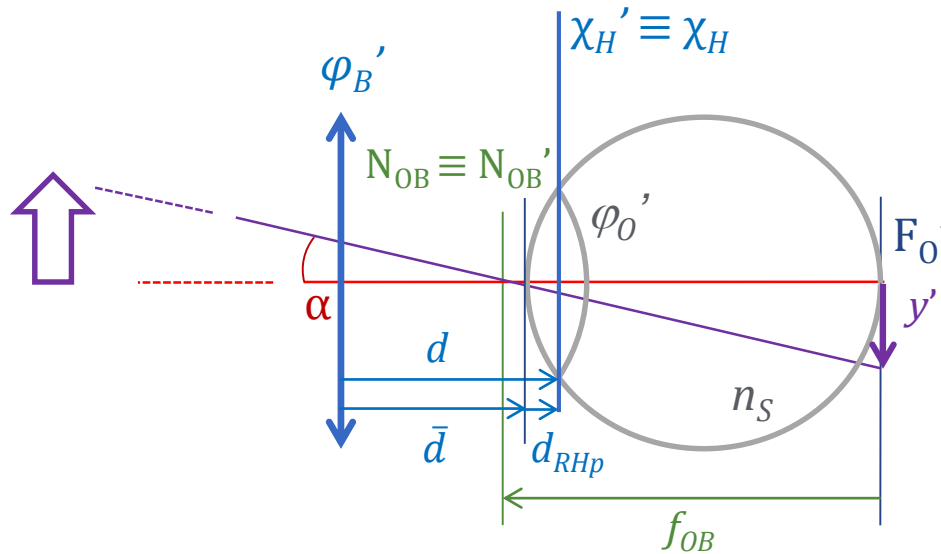
$$f_{BO} = -\frac{1}{\varphi_{BO}'}$$

$$d_{RHp} = 1,35 \text{ mm}$$

$$\varphi_{BO}' = \varphi_B' + \varphi_O' - d\varphi_B' \varphi_O' \quad \varphi_{BO}' = \frac{A_{RO} + \varphi_O'^E}{1 + dA_R}$$

$$\beta_{LP} = \frac{y'_L}{y'_P} = \frac{-f_{BOL} \operatorname{tg} \alpha}{-f_{BOp} \operatorname{tg} \alpha} = \frac{\varphi_{BOP}'}{\varphi_{BOL}'} = \left( \frac{A_{ROP} + \varphi_O'^E}{A_{ROL} + \varphi_O'^E} \right) \left( \frac{1 + d_L A_{RL}}{1 + d_P A_{RP}} \right)$$

# velikost obrazů na sítnici II



$$y' = -f_{BO} \operatorname{tg} \alpha$$

$$f_{BO} = -\frac{1}{\varphi_{BO}'}$$

$$d_{RHp} = 1,35 \text{ mm}$$

$$d_{RH0} = 1,602 \text{ mm}$$

$$\varphi_{BO}' = \varphi_B' + \varphi_O' - d\varphi_B' \varphi_O' \quad \varphi_{BO}' = \frac{n_S}{d_O - d_{RH0}} (1 - dS'_B)$$

$$\beta_{LP} = \frac{y'_L}{y'_P} = \frac{-f_{BOL} \operatorname{tg} \alpha}{-f_{BOp} \operatorname{tg} \alpha} = \frac{\varphi_{BOP}'}{\varphi_{BOL}'} = \left( \frac{d_{OL} - d_{RH0}}{d_{OP} - d_{RH0}} \right) \left( \frac{1 - d_P S'_{BP}}{1 - d_L S'_{BL}} \right)$$