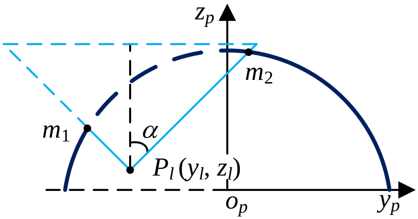
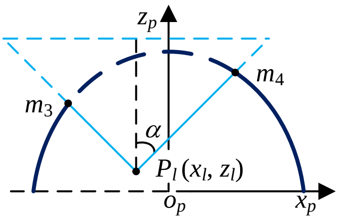
$$\begin{cases} \dfrac{x^2}{a_p^2} + \dfrac{y^2}{b_p^2} + \dfrac{z^2}{c_p^2} = 1 \\ (z - z_l)^2 = \dfrac{1}{\tan^2 \alpha}\left[(x - x_l)^2 + (y - y_l)^2\right] \end{cases} \tag{3}$$

$$\frac{(x - x_c)^2}{a_c^2} + \frac{(y - y_c)^2}{b_c^2} = 1 \tag{4}$$



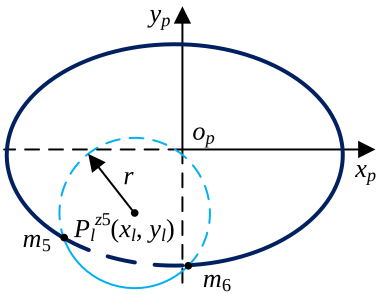
$$\begin{cases} z - z_l = \dfrac{y - y_l}{\tan \beta} \\ \dfrac{y^2}{b_p^2} + \dfrac{z^2}{c_p^2} = 1 - \dfrac{x_l^2}{a_p^2} \\ z > 0 \end{cases} \Rightarrow \begin{cases} m_1 = (x_l, y_1, z_1), \beta = -\alpha \\ m_2 = (x_l, y_2, z_2), \beta = \alpha \end{cases} \tag{5}$$

(a) The projection of the $y_p o_p z_p$ parallel plane



$$\begin{cases} z - z_l = \dfrac{x - x_l}{\tan \beta} \\ \dfrac{x^2}{a_p^2} + \dfrac{z^2}{c_p^2} = 1 - \dfrac{y_l^2}{b_p^2} \\ z > 0 \end{cases} \Rightarrow \begin{cases} m_3 = (x_3, y_l, z_3), \beta = -\alpha \\ m_4 = (x_4, y_l, z_4), \beta = \alpha \end{cases} \tag{6}$$

(b) The projection of the $x_p o_p z_p$ parallel plane



$$\begin{cases} (x - x_l)^2 + (y - y_l)^2 = r^2 \\ \dfrac{x^2}{a_p^2} + \dfrac{y^2}{b_p^2} = 1 - \dfrac{z_5^2}{c_p^2} \\ r = (z_5 - z_l)\tan \alpha \end{cases} \Rightarrow \begin{cases} m_5 = (x_5, y_5, z_5) \\ m_6 = (x_6, y_6, z_5) \end{cases} \tag{7}$$

(c) The projection of the $x_p o_p y_p$ parallel plane