If I get this right, I find the following

$$\boxed{\frac{\chi_s}{\chi_L}\begin{pmatrix}\xi_1\\ \xi_2\end{pmatrix} = r\begin{pmatrix}\cos\theta\\ \sin\theta\end{pmatrix} - \sum_{m=1}^{\infty}\frac{r^m}{m!}\sum_{s=0}^{m+1}\frac{1-(-1)^{m+s}}{4}\left\{\alpha^m_s\begin{bmatrix}\cos(s-1)\theta & \cos(s+1)\theta\\ -\sin(s-1)\theta & \sin(s+1)\theta\end{bmatrix}+\beta^m_s\begin{bmatrix}\sin(s-1)\theta & \sin(s+1)\theta\\ \cos(s-1)\theta & -\cos(s+1)\theta\end{bmatrix}\right\}\begin{bmatrix}C_+\\ C_-\end{bmatrix}}$$

Here $(\xi_1, \xi_2)^T$ represent appropriately normalized coord.s in source plane, whereas (r, θ) are appropriately normalized coord.s in screen-space, centered around image.

or whatever

SIS

$\psi(R) = \frac{R_E}{\chi_L^2} R$, $\quad R = \sqrt{x^2+y^2}$

$\alpha^0_1 = -\chi_L \partial_x \psi$

$\beta^0_1 = -\chi_L \partial_y \psi$

α

Må bruke likn. (9) og (10) i notatet på overleaf for å rekne ut α^m_s, β^m_s.