

$$M_0 = \begin{pmatrix} \cos[elk] & \frac{\sin[elk]}{k} & 0 & 0 \\ -k \sin[elk] & \cos[elk] & 0 & 0 \\ 0 & 0 & \cosh[elk] & \frac{\sinh[elk]}{k} \\ 0 & 0 & k \sinh[elk] & \cosh[elk] \end{pmatrix} \quad \begin{matrix} kL \rightarrow \Gamma \\ k = \frac{G}{B\rho} \end{matrix}$$

$$M = R \cdot M_2 \cdot R^{-2} \cdot M_1 \cdot R^2 \cdot M_0 \cdot R^{-2} \cdot M_1 \cdot R^2 \cdot M_2 \cdot R^{-1}$$

$$M = \begin{pmatrix} M_{xx} & M_{xy} \\ M_{yx} & M_{yy} \end{pmatrix} \quad M_{xy} = \begin{pmatrix} M_{xy_{1,1}} & f(k, L, d, \alpha) \\ M_{xy_{2,1}} & M_{xy_{2,2}} \end{pmatrix} \cdots L_0 = \alpha L$$

$$\text{Solve: } f(k, L, d, \alpha) \approx \sum_{n=0,4} \frac{d^n}{d\alpha^n} f(k, L, d) \frac{\alpha^n}{n!} = 0$$

$$\{\alpha \rightarrow -458.949\}, \{\alpha \rightarrow -1.01896\}, \{\alpha \rightarrow 0.318954\}, \{\alpha \rightarrow 460.003\}$$