

FULL PROBLEMNonlinear in ϕ_y

$$p = [\beta_x, \beta_y, \theta_E, a, b, \phi_y]$$

Matrix coefficients depend
on ϕ_y nonlinearly:

$$\begin{aligned} &\cos(2(\phi - \phi_y)) \\ &\sin(2(\phi - \phi_y)) \end{aligned}$$

Fix ϕ_y **CONDITIONAL PROBLEM**

Linear in remaining parameters!

$$p_{\text{linear}} = [\beta_x, \beta_y, \theta_E, a, b]$$

$$A(\phi_y) \cdot p_{\text{linear}} = b$$

For fixed ϕ_y , A is constant!
→ Solve exactly with linear algebra

*This is CONDITIONAL LINEARITY:
Linear in amplitudes when phase is fixed*