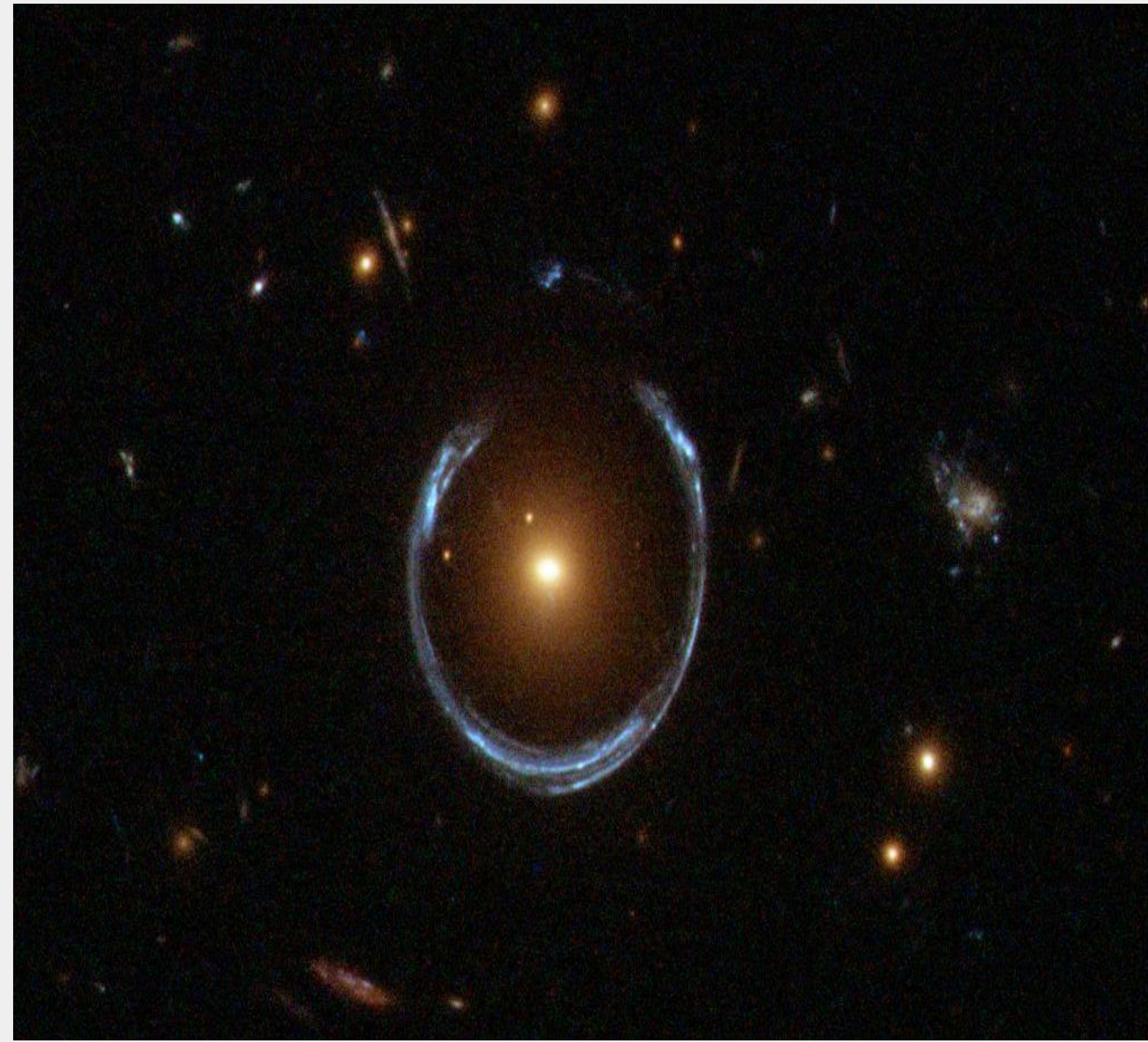


Analysis of Strong Gravitational Lens using Convolutional Neural Networks

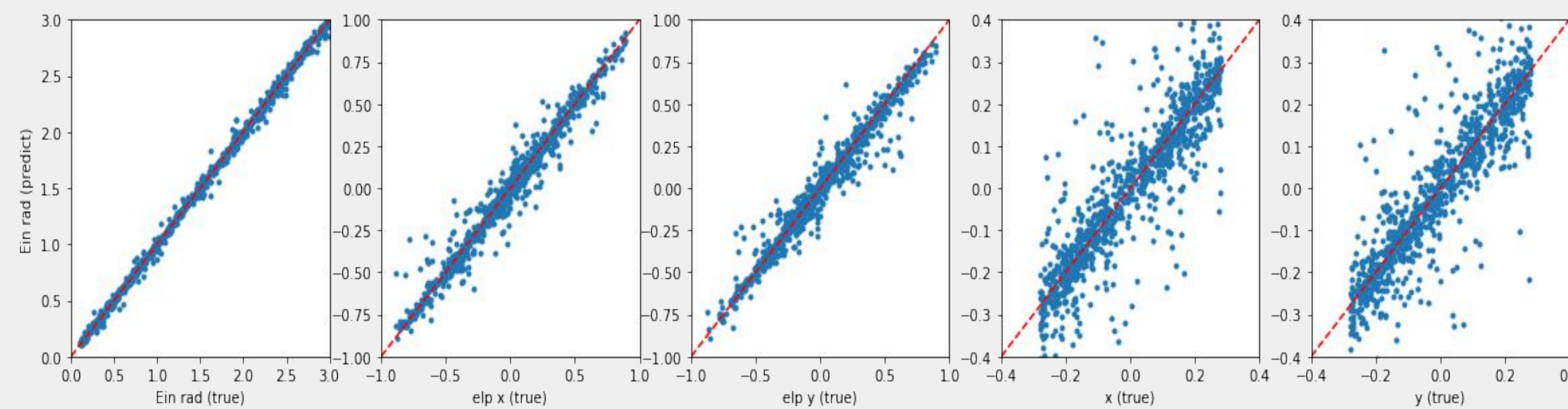
Yemeen Ayub

Gravitational Lenses



Results

Ensaï Predictions



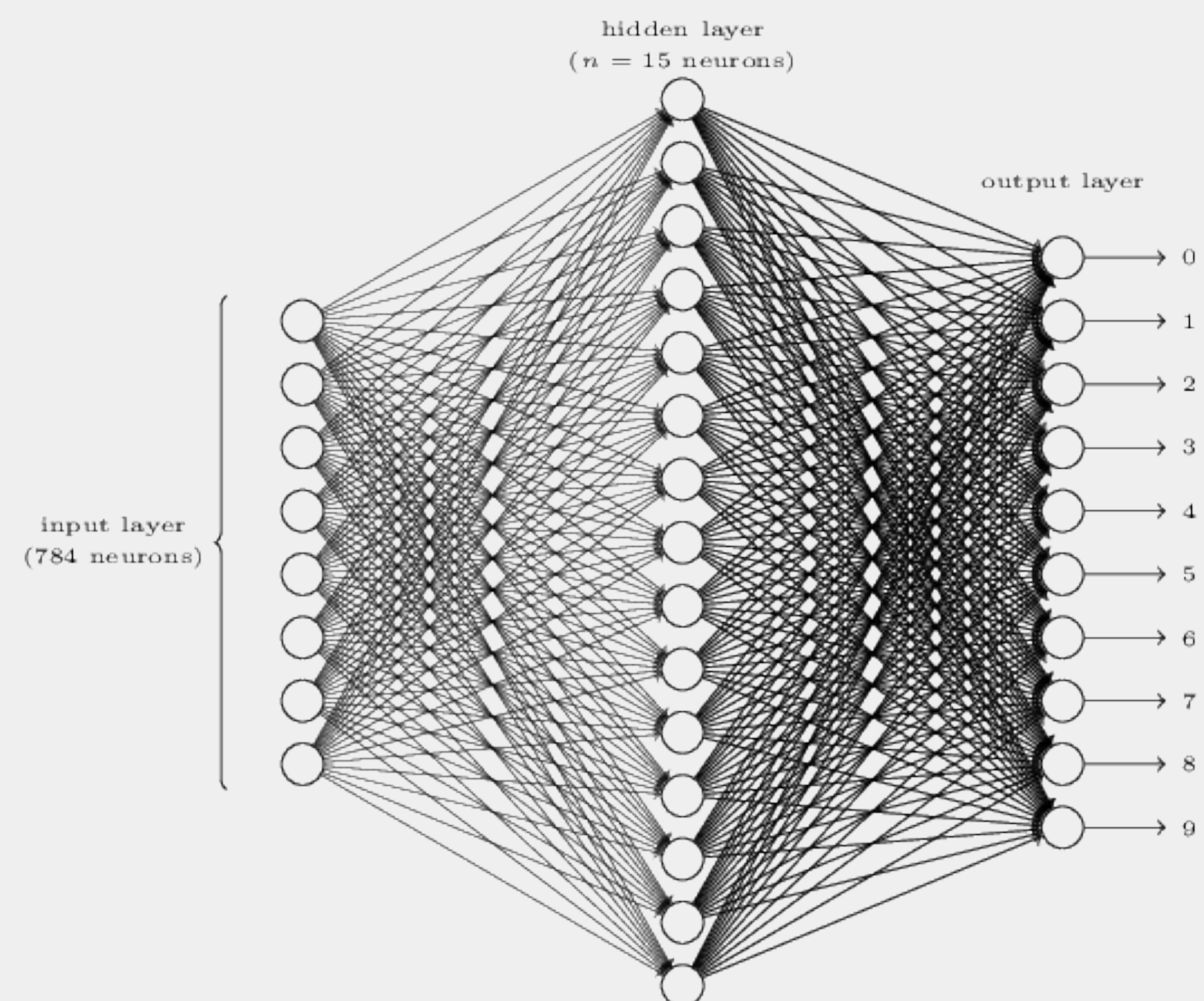
Theory

$$\epsilon_x = \frac{a^2 - b^2}{a^2 + b^2} e^{2i\phi}$$

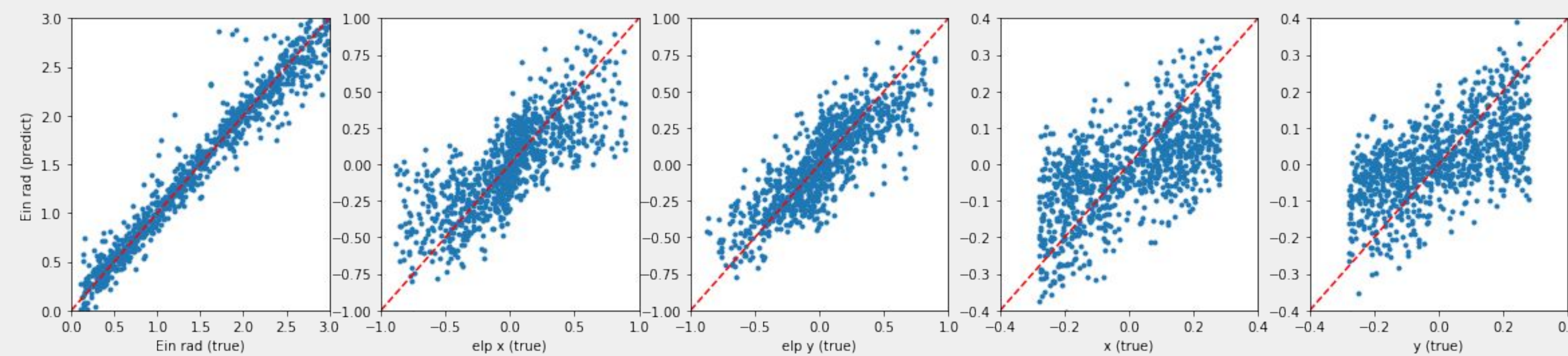
$$\epsilon_y = \frac{a - b}{a + b} e^{2i\phi}$$

$$\theta_e = \left(\frac{4GM}{c^2 D} \right)^{1/2}$$

Neural Networks



AlexNet Predictions



Data

