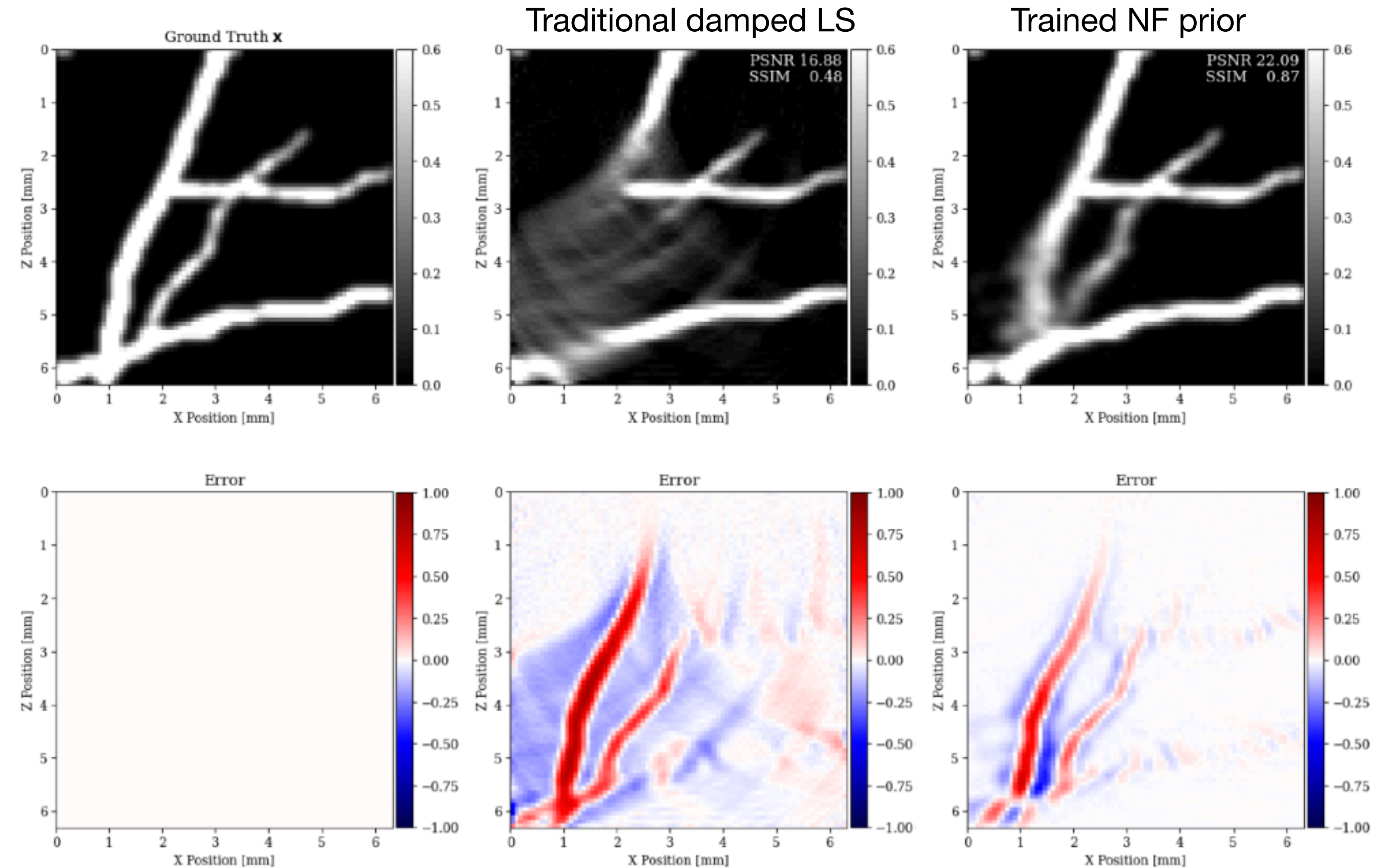


# MAP Optimization with NFs

Results with photoacoustic medical imaging reconstruction. Operator A is a forward wave solve representing ultrasound wave propagation

$$\operatorname{argmin}_{\mathbf{x}} \frac{1}{2} \|\mathbf{A}\mathbf{x} - \mathbf{d}\|_2^2 + \log R(\mathbf{x})$$

$$\operatorname{argmin}_{\mathbf{z}} \frac{1}{2} \|\mathbf{A}G_{\theta}(\mathbf{z}) - \mathbf{d}\|_2^2 + \frac{1}{2} \|\mathbf{z}\|_2^2$$



# **Normalizing Flow Applications: Uncertainty Quantification**