

$$\begin{array}{ccccccc}
 u(\theta_i, t_i) & \xrightarrow{\mathcal{F}_t} & \hat{u}(\theta_i) & \xrightarrow{\mathcal{F}_\theta} & \tilde{u}_i & \Bigg| & \tilde{u}_j \xrightarrow{\mathcal{F}_\theta^{-1}} \hat{u}(\theta_j) \xrightarrow{\mathcal{F}_t^{-1}} u(\theta_j, t_j) \\
 & & & & \tilde{u}_i = \tilde{u}_j & & \\
 & & & & + \text{non reflecting boundary} & & \\
 & & & & \text{condition on spurious frequencies} & &
 \end{array}$$