$$arepsilon_{
m DR} \leq arepsilon_{
m DR}^{
m threshold}$$
 Original Reduced

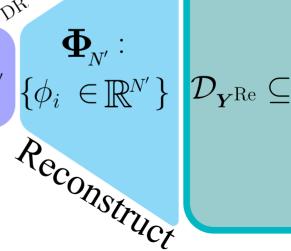
Reduction

space 
$$\mathcal{D}_Y \subseteq \mathbb{R}$$

\$ . St. space

Reduced

$$\mathbf{\Phi}_{N'}$$
:



space

$$\mathbf{\mathcal{D}_{Y}} \subseteq \mathbb{R}^{N} \left\{ \phi_{i} \in \mathbb{R}^{N'} \right\} \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Z}} \\ \mathbf{\mathcal{D}_{Z}} \\ \mathbf{\mathcal{D}_{X}} \end{array} \right] \left\{ \phi_{i} \in \mathbb{R}^{N'} \right\} \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Z}} \\ \mathbf{\mathcal{D}_{X}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left\{ \phi_{i} \in \mathbb{R}^{N'} \right\} \left[ \begin{array}{c} \mathbf{\mathcal{D}_{X}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left\{ \phi_{i} \in \mathbb{R}^{N'} \right\} \left[ \begin{array}{c} \mathbf{\mathcal{D}_{X}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left\{ \phi_{i} \in \mathbb{R}^{N'} \right\} \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \end{array} \right] \left[ \begin{array}{c} \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}} \\ \mathbf{\mathcal{D}_{Y}$$

Reconstructed