TRS-ODEN: $R \circ \phi_t = \phi_{-t} \circ R$ $\widehat{y}_i^{\text{rev2}}(1)$ $\widehat{\mathbf{y}}_{i}^{\text{rev}}(-1) = R(\widehat{\mathbf{y}}_{i}^{\text{fwd}}(1))$ $\hat{y}_i^{\text{rev}}(0)$ $\widehat{y}_i^{\text{rev2}}(1) = R(\widehat{y}_i^{\text{rev2}}(-1))$ $\widehat{\mathbf{v}}_{i}^{\text{fwd}}(\mathbf{0}) = \mathbf{y}_{i}(\mathbf{0})$ $y_i(1)$ $\widehat{y}_i^{\text{rev2}}(0) = y_i(0) = \widehat{y}_i^{\text{fwd}}(0)$ $y_i(1)$ $\mathcal{L}_{pred} = \left\| \hat{y}_i^{\text{fwd}}(\mathbf{1}) - y_i(\mathbf{1}) \right\|_2^2 := a$ $\mathcal{L}_{pred} = \left\| \widehat{\mathbf{y}}_{i}^{\text{fwd}}(\mathbf{1}) - \mathbf{y}_{i}(\mathbf{1}) \right\|_{2}^{2} := a$ $\mathcal{L}_{reverse} = \left\| R(\,\widehat{y}_i^{\text{rev}}(\mathbf{0})) - \widehat{y}_i^{\text{fwd}}(\mathbf{0}) \, \right\|_2^2 \coloneqq b$ $\mathcal{L}_{reverse2} = \left\| \widehat{\mathbf{y}}_i^{\text{rev2}}(\mathbf{1}) - \widehat{\mathbf{y}}_i^{\text{fwd}}(\mathbf{1}) \right\|_2^2 := b$

TREAT: $R \circ \phi_t \circ R \circ \phi_t = I$

$$\mathcal{L}_{reverse} = \|R(\hat{y}_i^{rev}(\mathbf{0})) - \hat{y}_i^{rev}(\mathbf{0})\|_2 \coloneqq b$$

$$\mathcal{L}_{reverse2} = \|\hat{y}_i^{rev}(\mathbf{1}) - \hat{y}_i^{rev}(\mathbf{1})\|_2 \coloneqq b$$

$$\mathcal{L}_{reverse2} = \|\hat{y}_i^{rev}(\mathbf{1}) - \hat{y}_i^{rev}(\mathbf{1})\|_2 \coloneqq b$$

$$\mathbf{MaxError}_{TREAT} = \max\{a, b\}$$

 $MaxError_{TRS-ODEN} = a + b$